

CHAPTER 10

SKU-12/A SEAT SURVIVAL KIT

Section 10-1. Description

10-1. GENERAL.

10-2. Seat Survival Kit, SKU-12/A, P/N 8510004, (figures 10-1 and 10-2) is designed for use with the MK-GRU-7A and MK-GRUEA-7 ejection systems. The kit functions as a seat for the aircrewman and container for an emergency oxygen system, life-raft, and survival items. The survival kits, less Koch fittings, seat and thigh support cushions, are manufactured by American Safety Flight Systems, Inc. (CAGE 31441). The SKU-12/A assembly is supplied by American Safety Flight Systems.

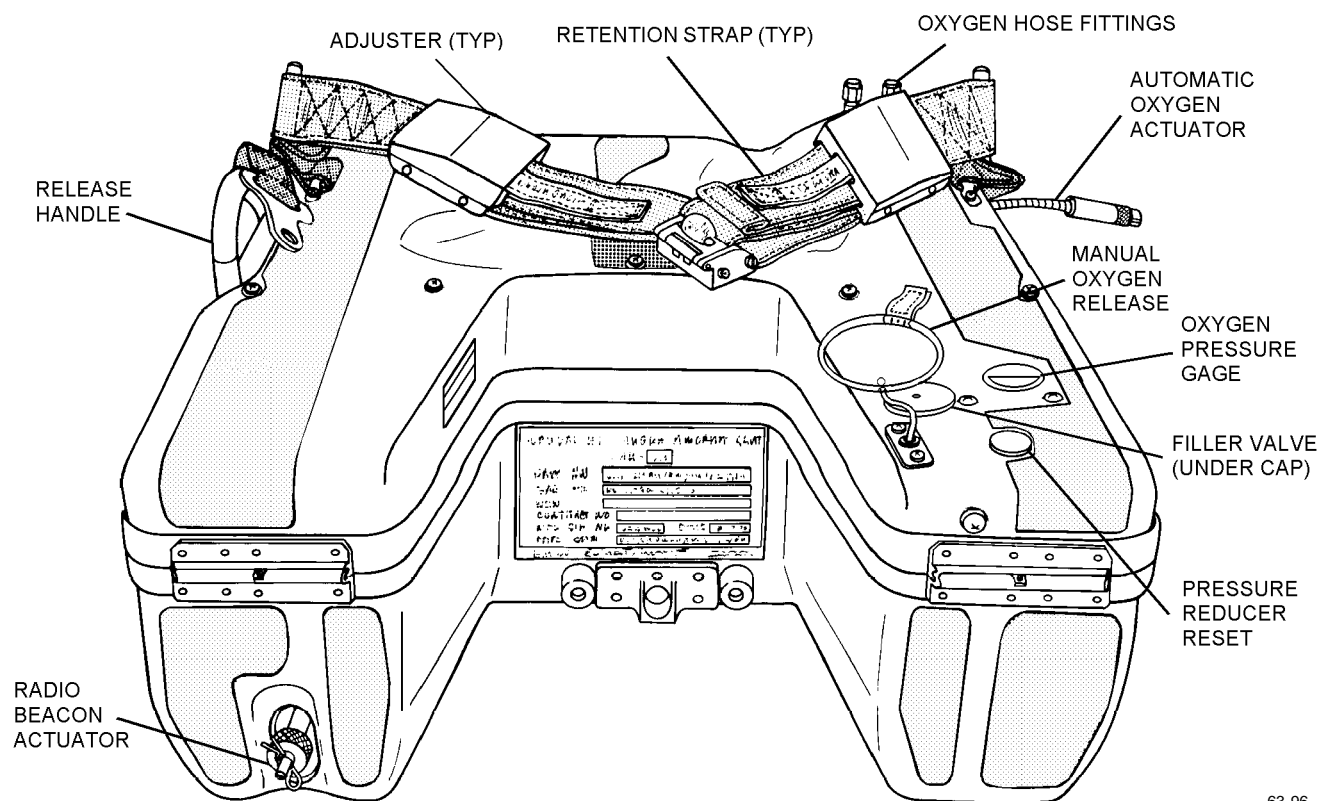
10-3. CONFIGURATION.

10-4. The SKU-12/A is a rigid-type container fabricated of molded fiberglass. It is designed to contain equipment and material necessary to enhance survival of the aircrewman after emergency separation from the aircraft. The SKU-12/A fits into the seat bucket, and is securely attached by lock receptacles at the lower aft corners of the seat bucket and negative-g retaining pin receptacle at center forward on the lower container. During normal operation the kit provides support and comfort for the aircrewman, and a routing for emergency oxygen and communications. If failure occurs in the aircraft oxygen supply, or in case of high altitude or underwater ejection, the kit contains a 50 cubic inch, 1800 psi, emergency oxygen cylinder that provides an emergency supply of oxygen for approximately 20 minutes. The emergency oxygen pressure gage is visible through an opening in the left thigh support of the container when the thigh support cushion is removed. The lid of the container is fastened to a metal valence and contains the latches and oxygen equipment. The lower container contains the latching mechanism, life-raft, survival equipment, and

an emergency radio beacon. The radio beacon actuator lanyard, located in the right front corner of the lower container, is attached to the aircraft and is actuated when the aircrewman ejects. The two halves of the kit, which are securely fastened together by a lock and latch mechanism, can be quickly separated by the aircrewman by actuation of a kit release handle when access to his life-raft and survival equipment is desired. The ventilated seat cushion and non-ventilated thigh support cushions are secured to the container lid and front section of the lower container by hook and pile tape. A carrying handle is provided at the rear of the kit.

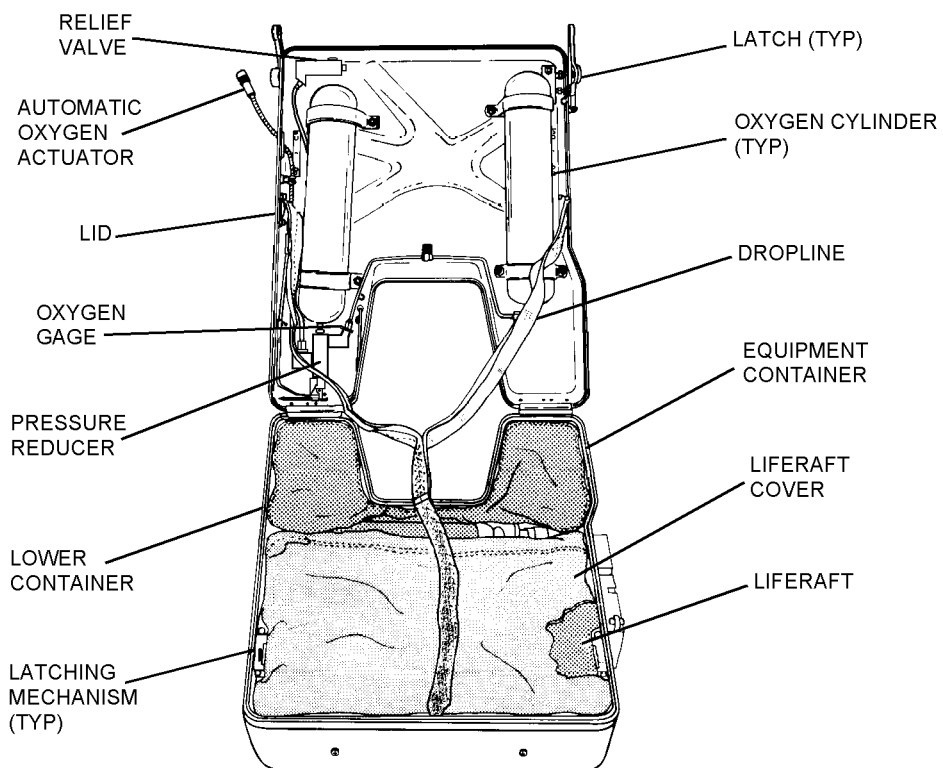
10-5. MK-GRUEA-7 and MK-GRU-7A (BUNO 159631 and subsequent). These ejection seats are equipped with one personnel service disconnect block secured to the left side of the ejection seat bucket. The personnel services connected to the block assembly consist of oxygen and communications, anti-g, vent air and an emergency oxygen automatic release cable connection. The oxygen, vent air and anti-g supplies flow directly through the block assembly to the aircrewman's anti-g garment and seat quick-disconnects.

10-6. MK-GRU-7A (BUNO 157980 thru 159630). The MK-GRU-7A ejection seat is equipped with two personnel service disconnect blocks. Personnel services connected to one block are the oxygen and communications line, an emergency oxygen automatic release cable, and a block release lanyard. The other block provides connection for the anti-g and vent air hoses and a block release lanyard. The vent air hose may be connected to the seat, a pressure suit, or an anti-exposure suit. Both blocks are secured to the left side of the ejection seat bucket.



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Figure 10-1. SKU-12/A Closed



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Figure 10-2. SKU-12/A Open

10-7. SUBASSEMBLIES. The major subassemblies of the SKU-12/A are as follows:

1. Emergency Oxygen System
2. Upper and Lower Container
3. Handle Release Mechanism
4. Dropline Assembly
5. Cushions
6. Survival Equipment Container
7. Hose Assembly
8. Harness Assembly
9. Liferaft Assembly

10-8. REFERENCE NUMBERS, ITEMS, AND SUPPLY DATA.

10-9. Figures 10-22 through 10-31 contain information on each assembly, subassembly, and component of the SKU-12/A. The figure and index number, reference or part number, description, and units per assembly are provided.

10-10. APPLICATION.

10-11. The SKU-12/A is a part of the survival equipment used by aircrewmembers aboard aircraft listed in table 10-1.

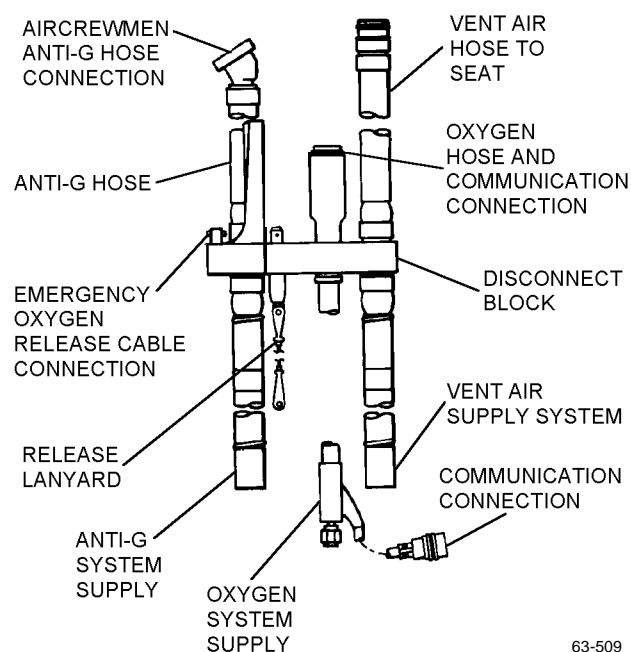
Table 10-1. SKU-12/A Application

Escape System	MK-GRUEA-7	MK-GRU-7A
Aircraft	EA-6B	F-14A

10-12. FUNCTION.

10-13. When the aircrewman ejects from the aircraft, the following series of events occur:

1. MK-GRUEA-7 and MK-GRU-7A (BUNO159631 and subsequent). As the seat rises, the personnel services block (figure 10-3) is disengaged from the seat by a lanyard secured to the cockpit deck. The emergency oxygen lanyard, which is attached to the block, actuates the emergency oxygen system. The lanyard then separates from the survival kit and remains with the block. The oxygen and communications, anti-g, and vent air hoses then separate from the block in sequence, depending on the slack in each hose. During descent, while in the seat or after separation from the seat, the aircrewman is provided with approximately 20 minutes emergency oxygen. The AN/URT-33A Radio Beacon, actuated by a lanyard attached to the cockpit deck, transmits a continuous signal during descent.



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Figure 10-3. Personnel Services Disconnect MK-GRUEA-7 and MK-GRU-7A (BUNO159631 and Subsequent)

2. MK-GRU-7A (BUNO157980 thru 159630). The personnel service blocks (figure 10-4) are disengaged from the seat by two release lanyards which are secured to the deck of the aircraft. As the seat rises, the aircrewman's oxygen hose is disconnected from the oxygen-communications block. Simultaneously, the emergency oxygen system, located in the survival kit, is actuated by an automatic actuation lanyard connected to the oxygen-communications block. The lanyard breaks away from the survival kit and remains connected to the block, which remains with the aircraft. The radio beacon, also activated by a lanyard attached to the cockpit deck provides a continuous signal during descent. The anti-g/vent air block is divided into three parts; lower block, intermediate block and upper block. Upon ejection, the lower block disconnects from the intermediate block by a lanyard attached to the cockpit deck. When seat-man separation occurs, the upper block remains with the aircrewman while the intermediate block remains with the seat.

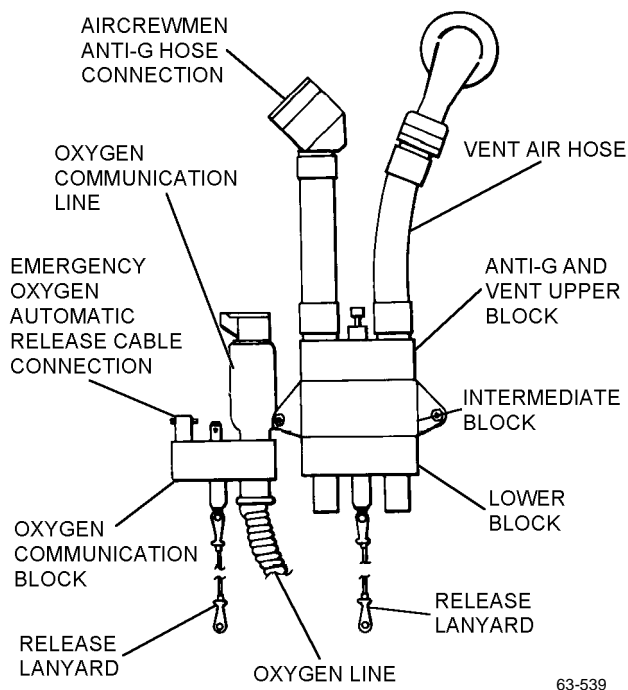


Figure 10-4. Personnel Services Block MK-GRU-7A (BUNO157980 thru 159630)

NOTE

If automatic actuation of the emergency oxygen system fails, the system can be actuated by pulling the manual oxygen release (figure 10-5).

3. When kit deployment is desired, the aircrewman pulls the kit release handle on the right side of the seat. As the kit separates and the lower container falls away, the dropline assembly connecting the two halves of the kit pulls out of the boots and the liferaft is extracted from the lower container. When the lower container reaches the end of its free fall and the dropline becomes taut, the resulting snubbing action automatically actuates the CO₂ inflation assembly and the raft is inflated. After entering the water, the aircrewman boards the raft and retrieves the lower half of the kit containing the survival equipment. The survival equipment is stored in a U-shaped container which is attached to the dropline by a length of nylon cord. The aircrewman may, if desired, cut this nylon cord and remove the U-shaped container from the lower half of the kit. The U-shaped container is equipped with a retention lanyard and snaphook. The lanyard is tied to the thong on the right slide fastener of the container. The aircrewman must fasten the snaphook on the other end of the lanyard to his survival vest to ensure retention of the container and all of his survival equipment (figure 10-8).

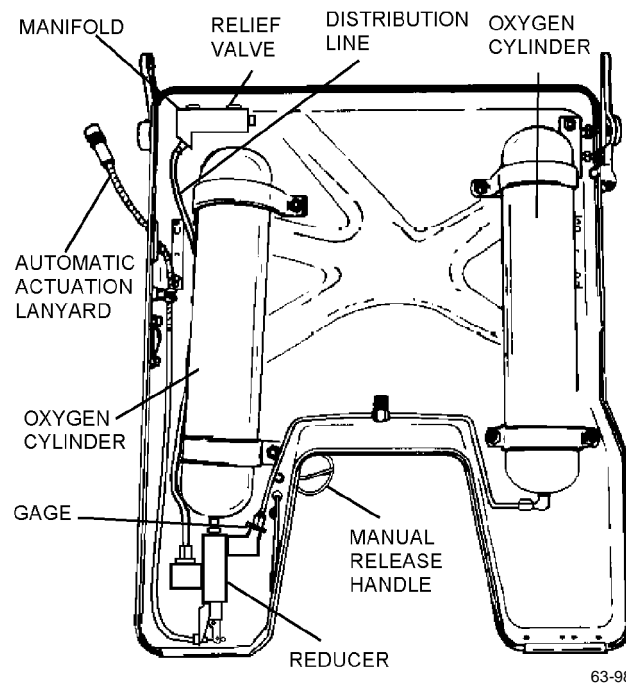


Figure 10-5. SKU-12/A Emergency Oxygen System

Section 10-2. Modification

10-14. GENERAL.

10-15. [Table 10-2](#) lists all modifications to the SKU-12/A Seat Survival Kit.

Table 10-2. SKU-12/A Directives

Description of Modification	Application	Modification Code
None		

Section 10-3. Rigging and Packing

10-16. GENERAL.

10-17. Unless operational requirements demand otherwise, rigging and packing of the SKU-12/A shall be accomplished at the Intermediate Level of maintenance. All rigging and packing shall be performed only by qualified personnel every 448 days for F-14 aircraft or every 365 days for EA-6B aircraft.

NOTE

Quality assurance steps are provided for critical operations. When a step is underlined, the Aircrew Survival Equipmentman shall perform the operation then have performance verified by Quality Assurance (QA).

10-18. RIGGING AND PACKING PROCEDURES.

10-19. Rigging and packing of the SKU-12/A is accomplished in eight separate operations as follows:

1. Preliminary Procedures
2. Radio Beacon Rigging and Installation
3. Survival Equipment Binding
4. Survival Equipment Packing
5. Stowing Dropline
6. Liferaft Preparation, Folding, Rigging and Packing
7. Closing Container

10-20. PRELIMINARY PROCEDURES. The following preliminary procedures shall be accomplished prior to rigging and packing the SKU-12/A.

1. Ensure SKU-12/A and components have been inspected in accordance with [Section 10-5](#).
2. Inspect oxygen hose assemblies in accordance with NAVAIR 13-1-6.3-1.
3. Remove upper container assembly from lower container assembly.

4. Remove liferaft cover. Inspect liferaft cover for damaged fabric and loose, broken, or frayed stitching.

WARNING

CO₂ bottle is under pressure. Use caution when disconnecting CO₂ bottle from liferaft. Do not loosen or attempt to remove inflation valve assembly from CO₂ cylinder.

CAUTION

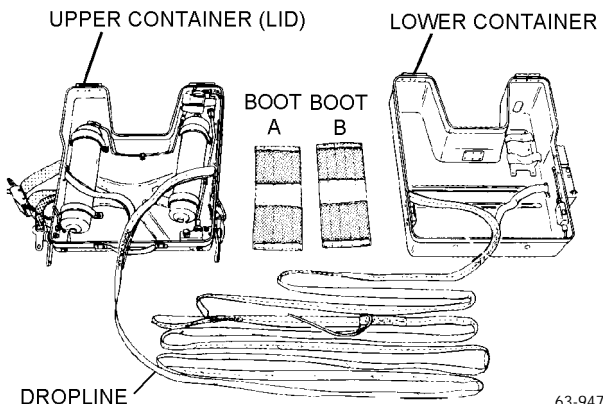
Ensure actuating line is disconnected from CO₂ cylinder inflation valve before removal of CO₂ cylinder from liferaft.

5. Disconnect CO₂ cylinder from liferaft as follows:

- a. Carefully remove liferaft from container
- b. Disconnect actuation line from CO₂ cylinder
- c. Disconnect CO₂ cylinder from liferaft
- d. Remove large loop of drop line from CO₂ cylinders neck
- e. Ensure anti-chafing disc is installed. Reconnect CO₂ cylinder to liferaft finger tight. If functional test is required torque valve 80 to 90 in-lbs.

6. Ensure liferaft and CO₂ cylinder have been inspected in accordance with NAVAIR 13-1-6.1-1.

7. Remove dropline from boots and align kit components on a clean flat surface as shown.



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Step 7 - Para 10-20

NOTE

A newly fabricated or procured dropline assembly will have a final dimension of 26 feet, 4 inches \pm 2 inches. However, a dropline assembly is subjected to a certain amount of stretch during its stowing process, and shrinkage during its cleaning process, therefore a tolerance of \pm 12 inches is acceptable for an older dropline assembly.

8. Inspect dropline to ensure proper attachment to upper and lower containers. Also ensure dropline length is 26 feet, 4 inches \pm 12 inches.

9. Ensure survival items have been inspected in accordance with NAVAIR 13-1-6.5.

NOTE

Ensure battery service life does not expire prior to the next scheduled inspection cycle of the assembly in which the radio set is installed. Refer to NAVAIR 16-30URT33-1 for battery service life.

10. Remove radio beacon set from kit and ensure that the battery and radio beacon have been inspected in accordance with NAVAIR 16-30URT33-1.

11. Check seat pan and cushion assembly for cuts, tears, and abrasions, and hardware for security of attachment, corrosion, damage, wear, and ease of operation.

10-21. RADIO BEACON RIGGING AND INSTALLATION. To rig and install the AN/URT-33A radio beacon, proceed as follows:

Materials Required

Quantity	Description	Reference Number
3	Rubber Bands (Type I)	MIL-R-1832 NIIN 00-568-0323
1	Actuator Indicator Assembly	CL204D3-11 (CAGE 80206)
As Required	Thread, Nylon, Type II, Class A, Size E	V-T-295 NIIN 00-244-0609 or equivalent
1	Beacon Set, Radio, AN/URT-33A	MIL-B-38401A
1	Pin, Cotter, Hairpin	LHCOTC NIIN 00-956-5635 (CAGE 96652)

Support Equipment Required

Quantity	Description	Reference Number
1	T-wrench	Fabricate IAW paragraph 10-72

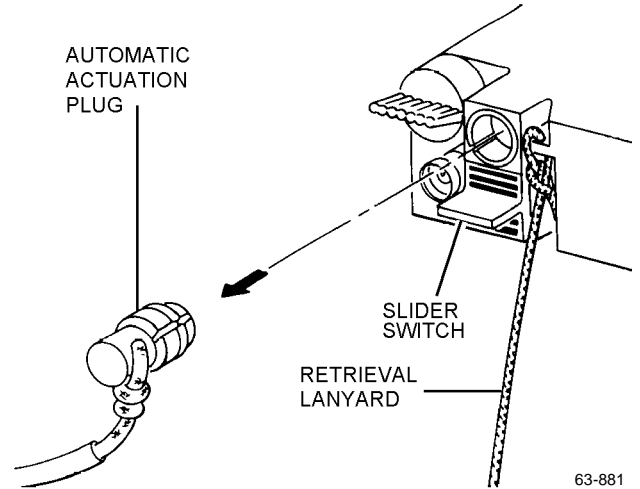
NOTE

Ensure that slider switch on radio beacon is OFF. Slider switch is in OFF position when word ON is not visible on radio beacon housing.

Determine if beacon has been modified in accordance with [steps 1 through 3](#) before proceeding to [step 4](#).

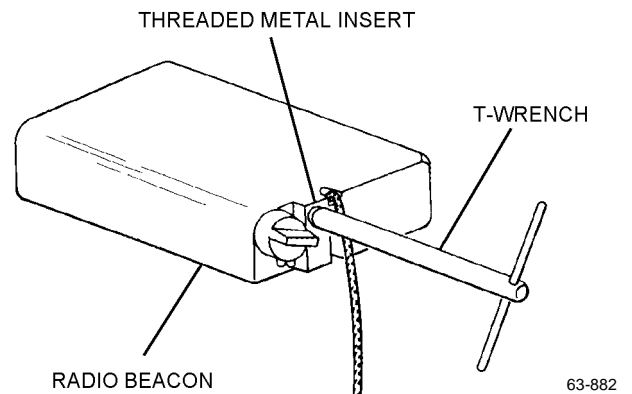
Retain automatic actuation plug with lanyard and metal insert in shop for possible future use.

1. Remove automatic actuation plug and lanyard from radio beacon assembly.



Step 1 - Para 10-21

2. Remove threaded metal insert from beacon using T-wrench.

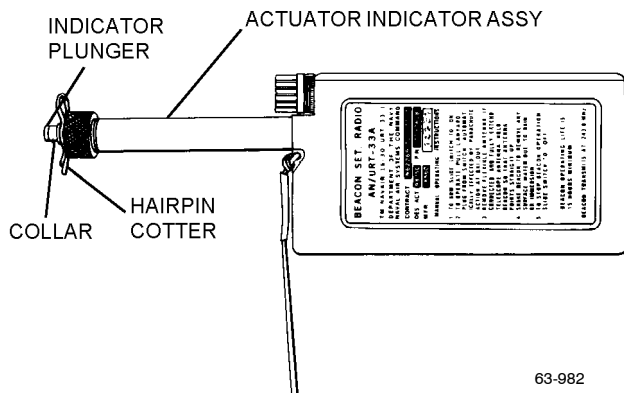


Step 2 - Para 10-21

NOTE

If T-wrench is not available, fabricate in accordance with paragraph 10-72.

3. Screw actuator indicator (P/N CL204D3-11) into beacon.



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Step 3 - Para 10-21

4. Hold indicator plunger depressed and insert hairpin cotter. Ensure that indicator plunger is retained in pressed position.

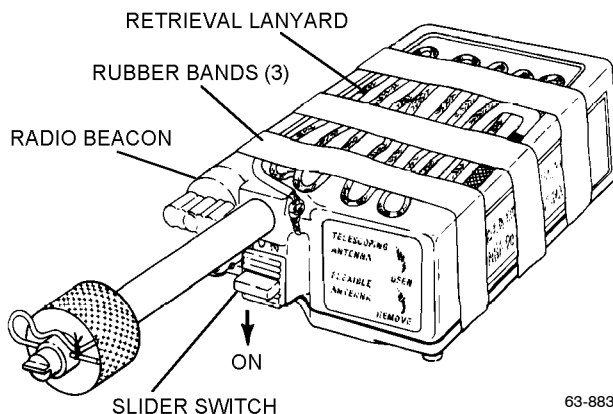
5. Ensure hairpin in cotter and collar are free to rotate 360° without binding. If hairpin cotter and collar are free, proceed to step 6. If hairpin cotter and collar do not rotate freely, refer to NAVAIR 16-30URT33-1.

6. Safety-tie open end of actuator indicator hairpin cotter by applying single-loop mousing, using size E nylon thread. Secure mousing loop with square knot. Cut off excess approximately 1/8 inch from knot.

NOTE

Do not release indicator plunger with beacon slider switch in ON (armed) position. Beacon will transmit an inaudible emergency distress signal.

7. Accordion-fold retrieval lanyard on top of radio beacon and secure with three rubber bands. Ensure retrieval lanyard is attached at both ends with a bow-line knot, with an overhand knot tied at the tag end.



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Step 7 - Para 10-21

8. Connect flexible wire antenna to beacon.

9. Place ON/OFF slider switch in ON position and install beacon assembly in bracket in lower container. Position beacon in bracket with indicator plunger, collar, and hairpin cotter extending through appropriate hole in right front of container. Check to ensure slider switch is in ON position then secure beacon with hook and pile tape fasteners.

Table 10-3. Survival Kit Items (Note 1)

Item Name	Quantity	Reference Number
Cord, (Nylon), Fibrous Type I	50 ft	NAVAIR 13-1-6.5
Signal, (Flare), Smoke and Illumination, MK-13 MOD 0 or MK-124 MOD 0 (Note 2)	2	NAVAIR 13-1-6.5
Sea (Dye) Marker, Fluorescent	2	NAVAIR 13-1-6.5
Sponge, (Bailing), Cellulose Type II, Class 2	1	NAVAIR 13-1-6.5
SRU-31/P Survival Kit, Packet #1 (Medical) (Note 3)	1	NAVAIR 13-1-6.5
SRU-31/P Survival Kit, Packet #2 (General) (Note 3)	1	NAVAIR 13-1-6.5
SRU-31A/P (Note 7)	Optional	NAVAIR 13-1-6.5
Water, Drinking, Canned (Note 4)	1	NAVAIR 13-1-6.5
Bag, Drinking Water (50 ml) (Note 5) or	6	NAVAIR 13-1-6.5
Water, Drinking, Emergency (118 ml) (Note 5)	3	NAVAIR 13-1-6.5
Opener, Can, Hand (Note 6)	1	NAVAIR 13-1-6.5
Ground/Air Emergency Code Card	1	NAVAIR 13-1-6.5
Blanket, (Combat) Casualty, 3 oz	1	NAVAIR 13-1-6.5
Envelope, Packing List	1	NAVAIR 13-1-6.5
Beacon Set, Radio	1	NAVAIR 13-1-6.5
Liferaft, Inflatable	1	NAVAIR 13-1-6.1-1

Notes: 1. The items listed are typical and are considered mandatory for inclusion in the survival kit container. Deviation from the listed items may be required by certain Functional Air Wings (FUNCWINGS), Carrier Air Wings (CVW), COMFAIRS, or Marine Air Wings (MAW). Requests for deviations must be forwarded to and authorized by TYCOMS and with information to Fleet Support Team (FST) at NAVAIRWARCENACDIV Patuxent River MD via Naval Message. When optional items are substituted, particular attention must be paid to the binding sequence so that physical sizes and binding order of substituted items remain approximately the same. That portion of an item name in parentheses is a common-use name or container size and is not intended for supply requisition purposes.

2. MK-13 MOD 0 shall be used until stocks are depleted. MK-124 MOD 0 will replace MK-13 MOD 0 as stocks become available.

3. SRU-31/P complete kits including Medical Packet (#1) and General Packet (#2) may be ordered; instructions for packing and ordering these kits are found in NAVAIR 13-1-6.5.

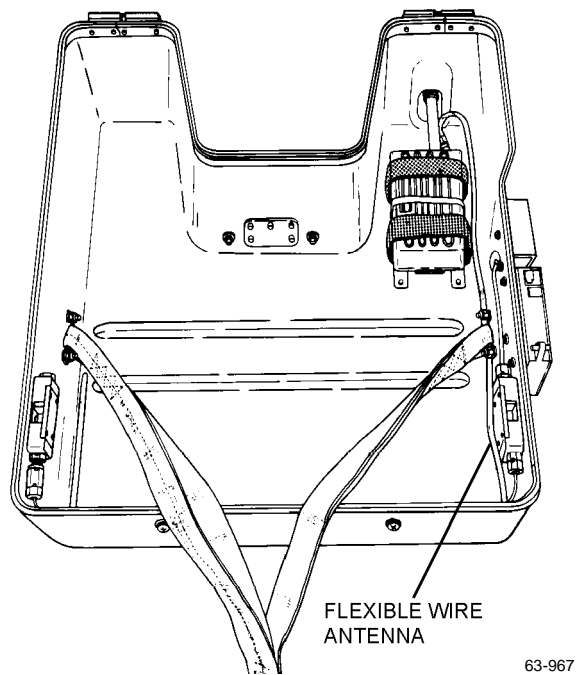
4. When the supply for emergency canned water has been exhausted use bagged drinking water.

5. If Bag, Drinking Water (50 ml), is not available, substitute Water, Drinking, Emergency (118 ml), in accordance with NAVAIR 13-1-6.5.

6. If canned water is not being used there is no need to pack can opener.

7. The selection of SRU-31/P or SRU-31A/P Individual Aircrewmember's Survival Kit will be at the discretion of the TYPE COMMANDER depending on mission requirements, reference NAVAIR 13-1-6.5, Chapter 9, for detailed information.

10. Route flexible wire antenna aft along right side of lower container.



Step 10 - Para 10-21

10-22. SURVIVAL EQUIPMENT BINDING. Ensure all survival items have been inspected in accordance with NAVAIR 13-1-6.5 before binding. To bind survival items, proceed as follows (table 10-3).

NOTE

To prevent loss of survival items, tie items individually and then tie to 140-inch length of nylon cord. Nylon cord of prescribed lengths required for this procedure shall be seared at both ends to prevent fraying (table 10-4).

Table 10-4. Nylon Cord Lengths Required for Binding

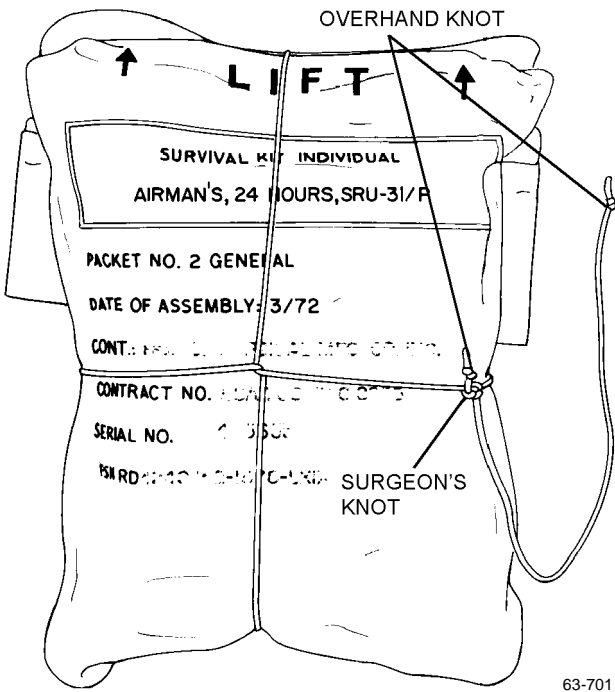
Length (Inches)	Number Required
140	1
12 (Note 1)	5
30	1
36	2
40	3
50 (Note 1)	1

Notes: 1. When using bagged water in place of canned emergency water, the number of required 12 inch lengths will be a total of 6 and the required 50 inch lengths will be 0.

NOTE

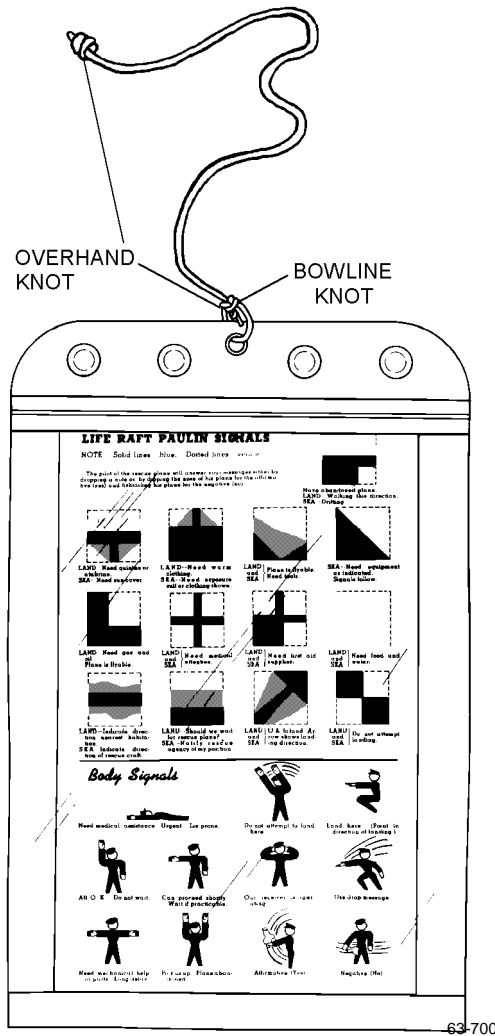
SRU-31/P Packet #1 (Medical) shall be folded approximately in half prior to binding.

1. Tie an overhand knot in each end of a 40-inch length of nylon cord. Wrap cord around packet #1 of the SRU-31/P Survival Kit. Rotate cords 1/4 turn and wrap cord around opposite sides of packet. Tie with a surgeon's knot. Ensure cord-end overhand knot is positioned snugly against surgeon's knot. Tie packet #2 in same manner, except do not fold.



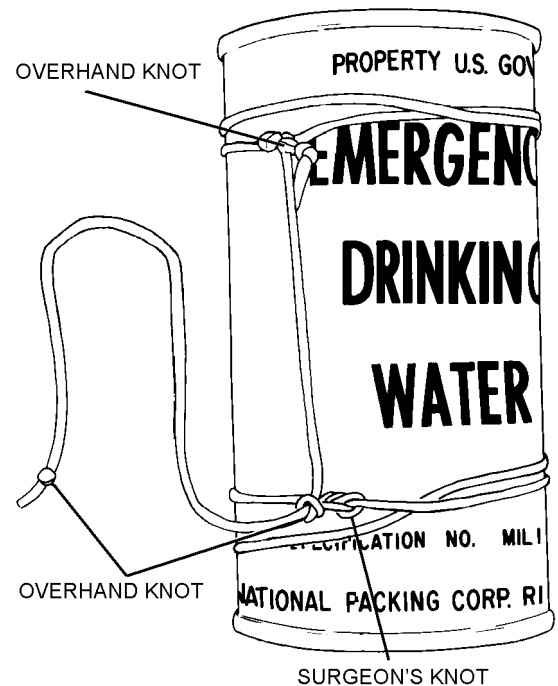
Step 1 - Para 10-22

2. Insert Ground/Air Emergency Code card into a clear vinyl envelope (MIL-B-117), and close sealing fastener. Tie an overhand knot in each end of a 12-inch length of nylon cord, and pass knot through center hole in envelope. Tie a bowline with a 1-inch loop. Ensure cord-end overhand knot is snugly against bowline knot.



Step 2 - Para 10-22

3. Tie an overhand knot in each end of a 50-inch length of nylon cord. Wrap one end of cord two overlapping turns around end of canned water and tie with surgeon's knot positioned snugly against cord-end overhand knot. Route cord to opposite end of can. Wrap cord two overlapping turns around can and tie with surgeon's knot followed by an overhand knot positioned snugly against surgeon's knot. Cord between end-ties shall be drawn tight.



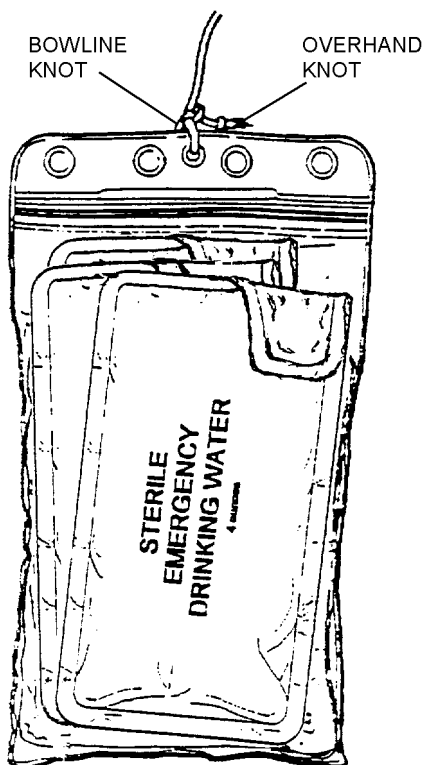
Step 3 - Para 10-22

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NOTE

Replacement rate of exhausted canned water shall be in accordance with the NAV-AIR 13-1-6.5 manual. Bagged emergency drinking water shall be stowed in the same order as canned emergency water. The bags of water shall be stowed in a flat configuration.

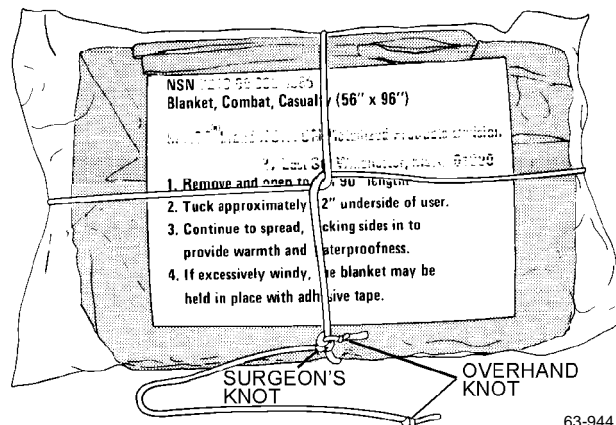
4. Bagged water. Place a maximum of three 4-ounce bagged emergency drinking water flat inside a clear vinyl envelope (MIL-B-117) with pour spout folded down. Bagged water must be able to fit into envelope without disrupting the closure of the sealing slide fastener. Using a 12-inch length of cord, tie an overhand knot on each end and pass knot through center hole in envelope. Secure with bowline knot, allowing an approximate 1-inch loop. Position an overhand knot snugly against the bowline knot. Ensure overhand knot is snug against surgeon's knot.



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Step 4 - Para 10-22

5. Tie an overhand knot in each end of a 40-inch length of nylon cord. Wrap cord around the combat casualty blanket. Rotate cords 1/4 turn as shown, and wrap cord around opposite side of blanket. Tie with a surgeon's knot. Ensure overhand knot is snugly against surgeon's knot.



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Step 5 - Para 10-22

6. Tie an overhand knot in each end of a 12-inch length of nylon cord. Pass overhand knot through center grommet in dye marker, and tie a bowline with a 1-inch loop. Ensure overhand knot is snugly against bowline knot.



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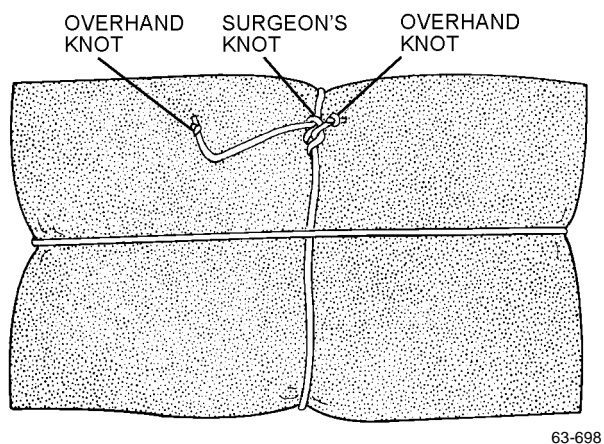
Step 6 - Para 10-22

7. Tie second dye marker in same manner as [step 6](#).

NOTE

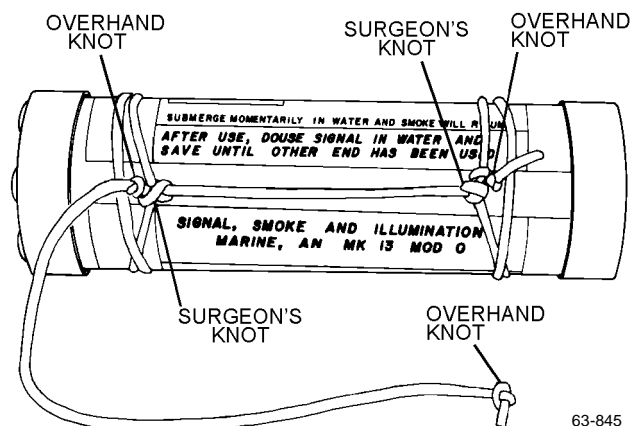
Compress bailing sponge to minimum thickness while wet, and allow to dry in the compressed state before tying.

8. Tie an overhand knot in each end of a 30-inch length of nylon cord. Wrap cord around bailing sponge, then rotate cords 1/4 turn as shown. Wrap cord around opposite side of sponge and tie with a surgeon's knot. Ensure overhand knot is snugly against surgeon's knot.



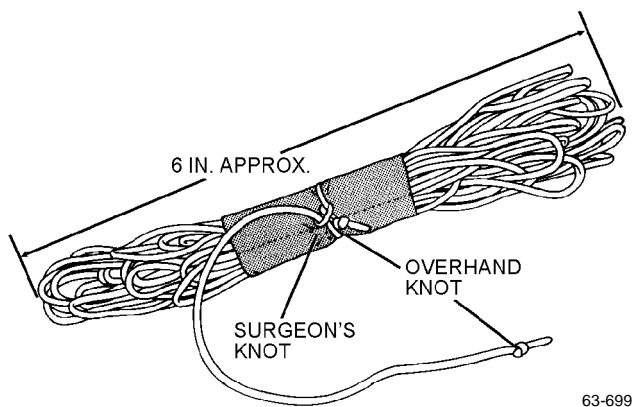
Step 8 - Para 10-22

9. Tie an overhand knot in each end of a 36-inch length of nylon cord. Wrap one end of cord two overlapping turns around end of signal flare (MK-13 MOD 0 or MK-124 MOD 0) and tie with surgeon's knot positioned snugly against cord-end overhand knot. Route cord to opposite end of flare. Wrap cord two overlapping turns around end of flare and tie with surgeon's knot followed by an overhand knot positioned snugly against surgeon's knot. Cord between end-ties shall be drawn tight. Tie second flare in same manner.



Step 9 - Para 10-22

10. Accordion fold the 50-foot length of Type I nylon cord in 6-inch bights. Cut a 2 x 3-inch piece of nylon duck material, and wrap the material around the center of the folded cord. Tie an overhand knot in each end of a 12-inch length of nylon cord, and secure one end around the center of the nylon duck material with surgeon's knot. Ensure overhand knot is snugly against surgeon's knot.



Step 10 - Para 10-22



Ensure pointed end of can opener is wrapped with adequate chafing material to prevent damage to other survival items.

11. Tie an overhand knot in each end of a 12-inch length of nylon cord. Pass overhand knot through hole in can opener, and tie a bowline knot with a 1-inch loop. Ensure overhand knot is snugly against bowline. Wrap pointed end of can opener with chafing material and secure in place with a rubber band (figure 10-6).

12. Ensure survival items are properly tied.

13. Using the 140-inch length of Type I nylon cord, form a 3/4 to 1-inch overhand loop knot approximately 12 inches from one end. Continue forming these loops every five inches until a total of 12 loops are completed. Ensure 25 (± 1) inches of cord remains after forming last overhand loop.

NOTE

Tie survival items to 140-inch cord in the order shown in figure 10-6.

14. Tie each item to a loop with a surgeon's knot. Position cord-end knot snugly against surgeon's knot.

10-23. SURVIVAL EQUIPMENT PACKING. To pack survival equipment into the survival equipment container, proceed as follows (figure 10-7).

1. Place equipment container on table with attaching loops toward packer, and the word EQUIPMENT up.

2. Attach bitter end (closest to can opener) of 140-inch length of nylon cord (with attached survival items) to the loop provided in the forward end of the right leg section of equipment container. Tie with a 2-inch loop bowline and an overhand knot. Ensure overhand knot is positioned snugly against bowline knot.

3. Stow bailing sponge on bottom surface of the right leg pocket.

4. Place 50-foot length of nylon cord on top of sponge.

5. Place can opener, point aft and down, on top of nylon cord.

6. Place a signal flare on top of sponge along each side of can opener and cord.

7. Stow SRU-31/P survival kit packet #1 on top of the two signal flares.

8. Place one dye marker vertically against equipment stowed in right leg.

9. Starting at opposite end of the 140-inch cord, place SRU-31/P packet #2 against outboard wall of left leg pocket.

10. Place can of water alongside the SRU-31/P packet.

11. Fold Ground/Air Emergency Code card in half, and slide in between SRU-31/P packet and water can.

12. Place casualty blanket on top of water can.

13. Place second dye marker vertically against the equipment stowed in left leg.

14. Check stowage with [figure 10-7](#). Ensure all equipment is in leg pockets and a void space remains at aft end of equipment container.

15. Route equipment container retention strap snaphook out right side of equipment container. Close equipment container and connect retention lanyard snaphook to thong on slide fastener.

16. Place equipment container in forward section of lower container. Cut a 52 \pm 1-inch length of Type III nylon cord (MIL-C-5040), and sear ends. Secure cord to equipment container and dropline and tack ([figure 10-8](#)).

NOTE

All tacking cord shall be coated with a mixture of 50% beeswax and 50% paraffin. The cord may be dipped in a melting pot 160° to 200° or drawn across a solid block of the mixture.

10-24. STOWING DROPLINE. To stow dropline in boots, proceed as follows:

NOTE

Stowage boots are referred to as boot A and boot B for identification purposes only. There are no physical differences between boots and the letters A and B do not actually appear on them.

Numbers on stowage channels of boots correspond to dropline bights and the order in which they are to be stowed. Numbers appear in illustration for clarity, they do not actually appear on stowage boots.

The identification yarn on earlier fabricated dropline assemblies may be located on the underside of the webbing. However, procedural steps depicting identification yarn location will be reversed throughout the dropline stowage procedures for these assemblies. Future fabrication of the dropline for the SKU-12/A will be in accordance with [paragraph 10-71](#).

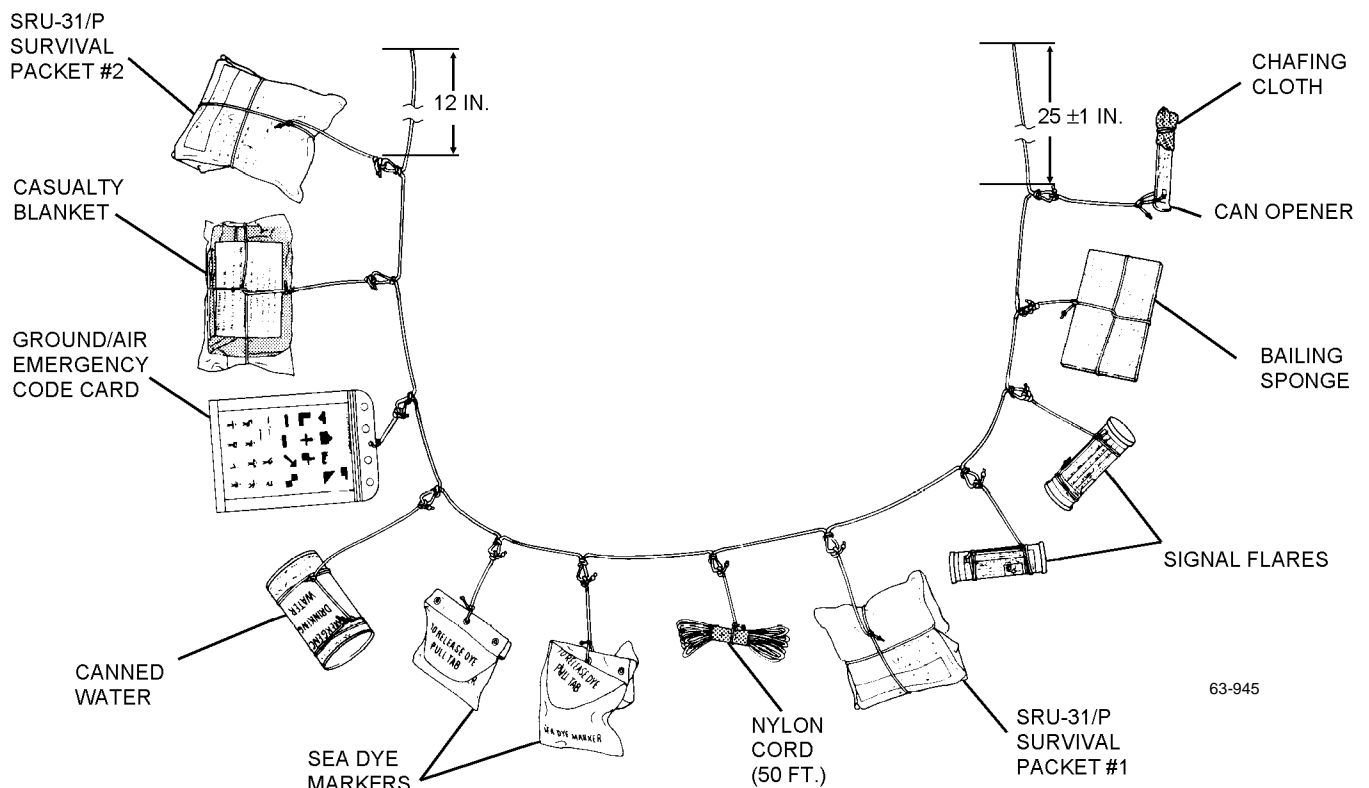
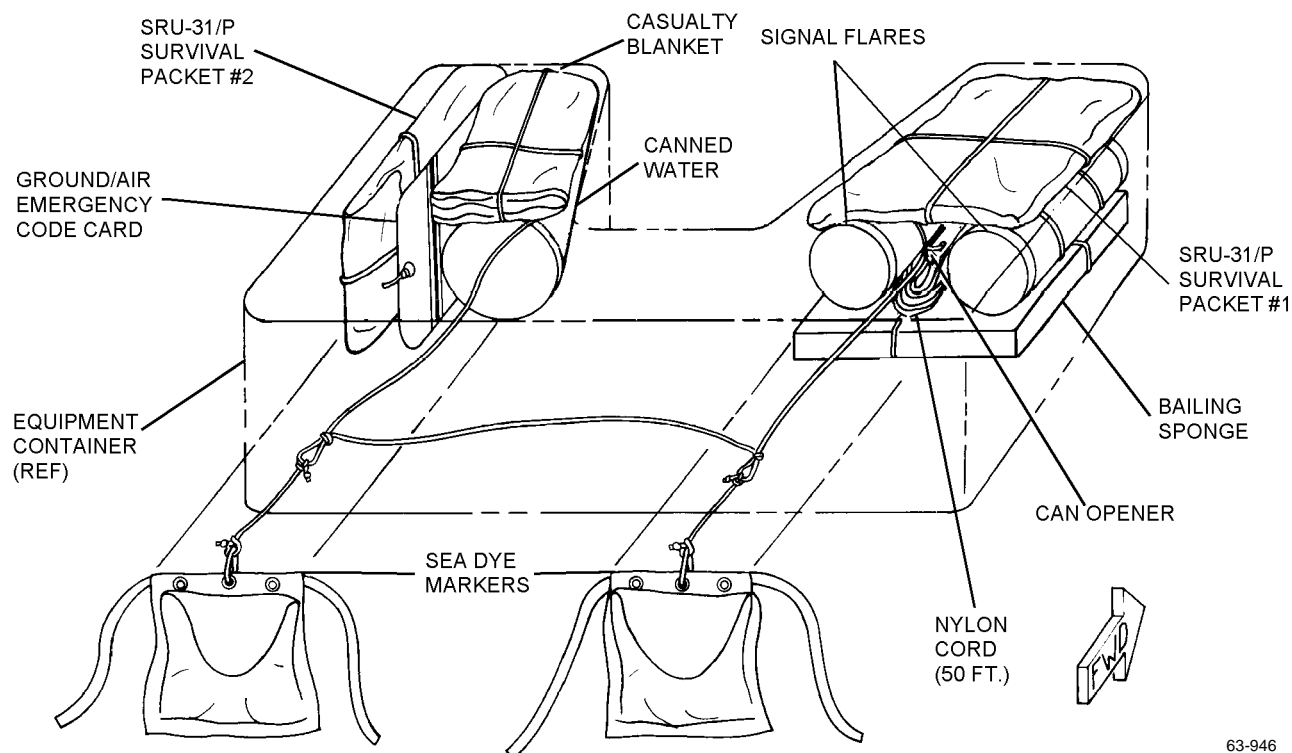
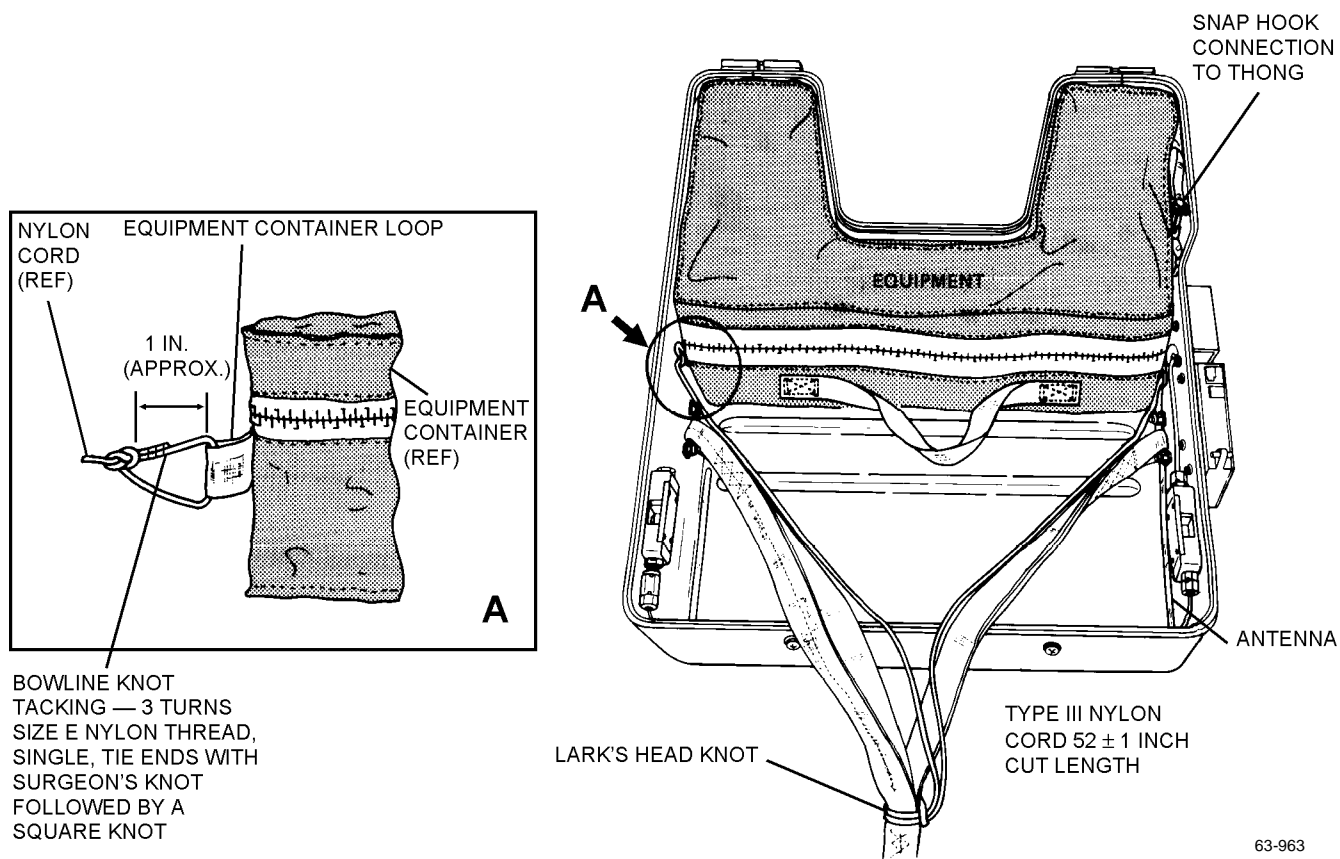


Figure 10-6. Binding Survival Items



63-946

Figure 10-7. Stowing Survival Equipment

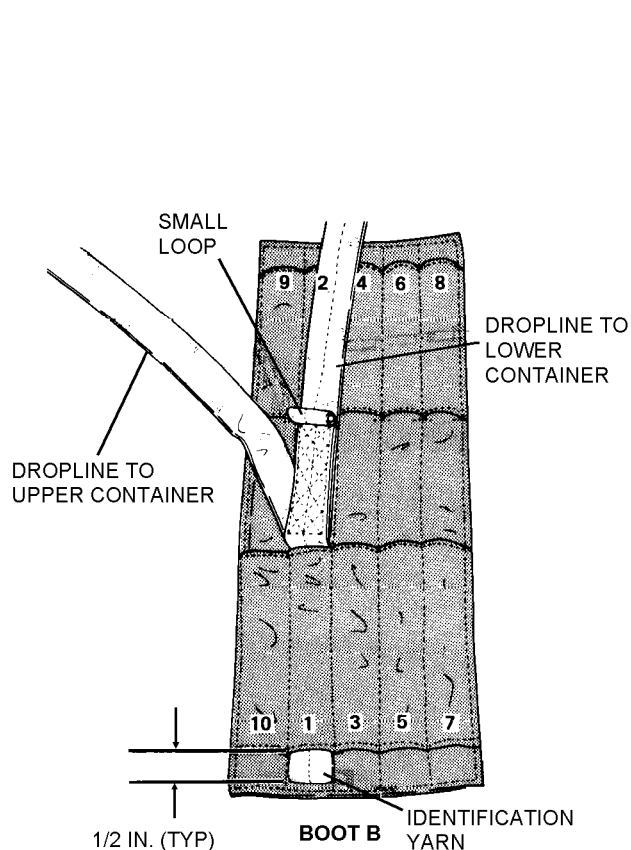


63-963

Figure 10-8. Stowed Survival Equipment Container

1. Lay dropline out flat between container halves with dropline loops up. Remove all twists from dropline prior to beginning stowing operation.

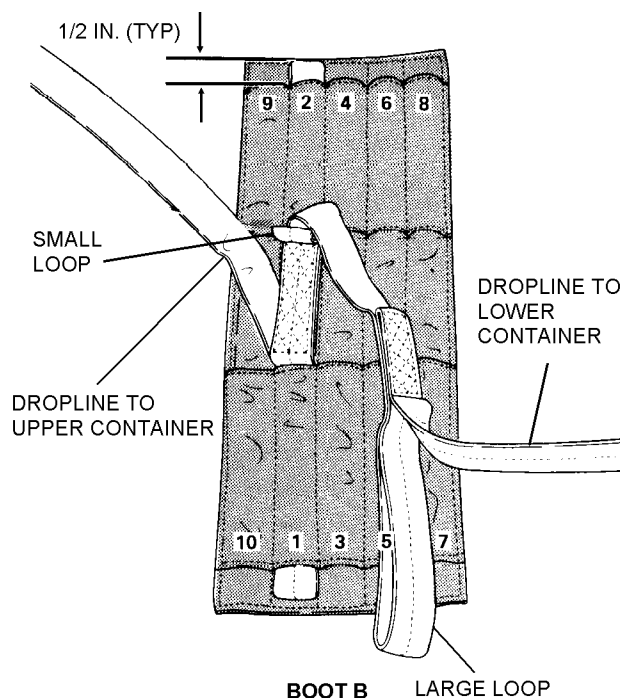
2. Position boot B to the left of lower container. Form the first bight 5 ± 1/2 inch from base of small loop stitching. Bight shall be in portion of dropline going to upper container and small loop shall face up. Stow bight in channel 1 of boot B. Push bight into channel with a 7-inch length of 3/8-inch hardwood dowel tapered at one end. There shall be a 1/2-inch protrusion at end of channel and identification yarn shall be visible at protrusion.



63-721

Step 2 - Para 10-24

3. Second bight shall be formed in portion of dropline going from small loop to large loop and shall be stowed in channel 2. Identification yarn shall not show at protrusion.

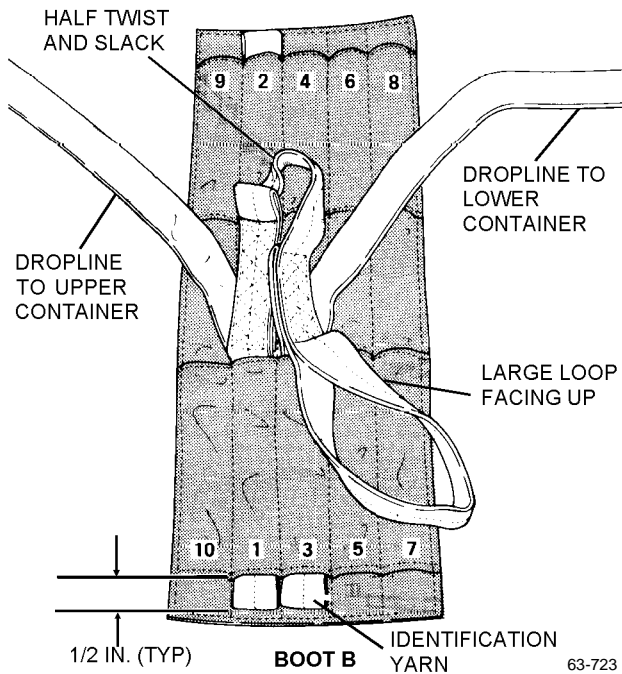


63-722

Step 3 - Para 10-24

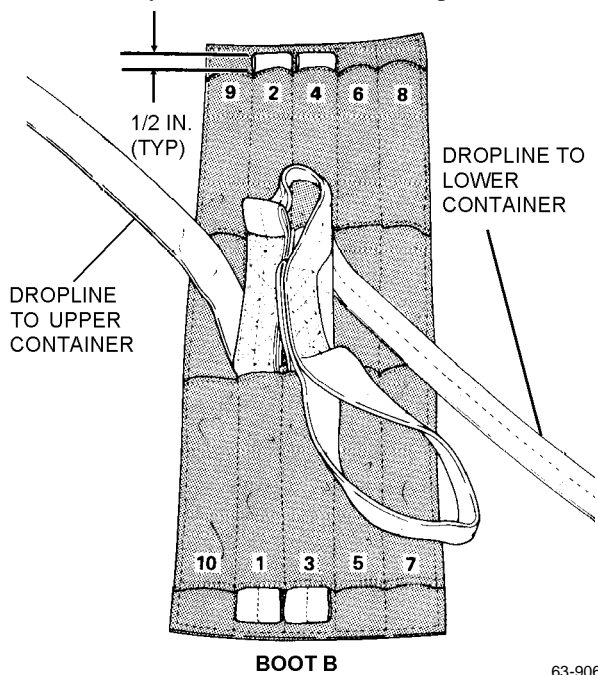
NAVAIR 13-1-6.3-2

4. Place a half-twist in dropline by rotating clockwise so that large loop faces up. Stow third bight in channel 3. A small amount of slack may exist between bights 2 and 3. Identification yarn shall be visible at protrusion.



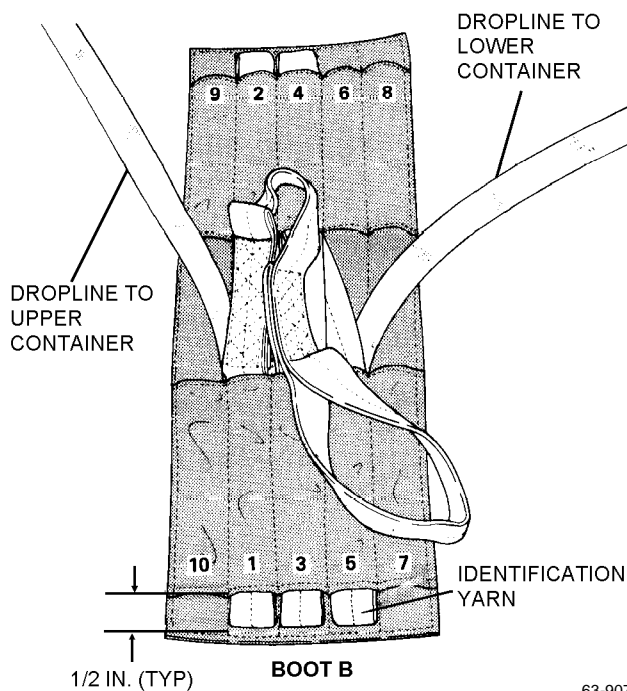
Step 4 - Para 10-24

5. Stow fourth bight in channel 4, ensuring that identification yarn does not show at protrusion.



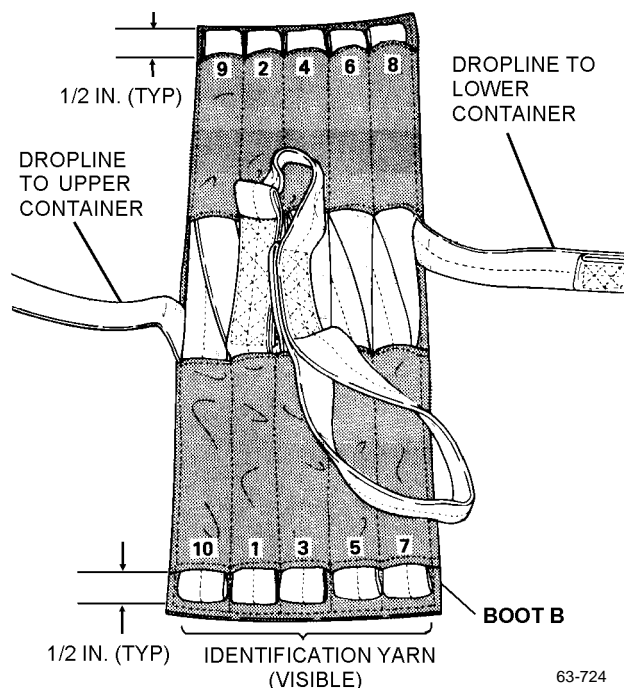
Step 5 - Para 10-24

6. Stow fifth bight in channel 5, ensuring that identification yarn is visible at protrusion.



Step 6 - Para 10-24

7. Stow remainder of dropline in boot B in accordance with numbering sequence on boot as shown, maintaining 1/2-inch protrusion. If there is insufficient line, due to allowable tolerance in length of dropline, a full stow may be impossible in channel 8.

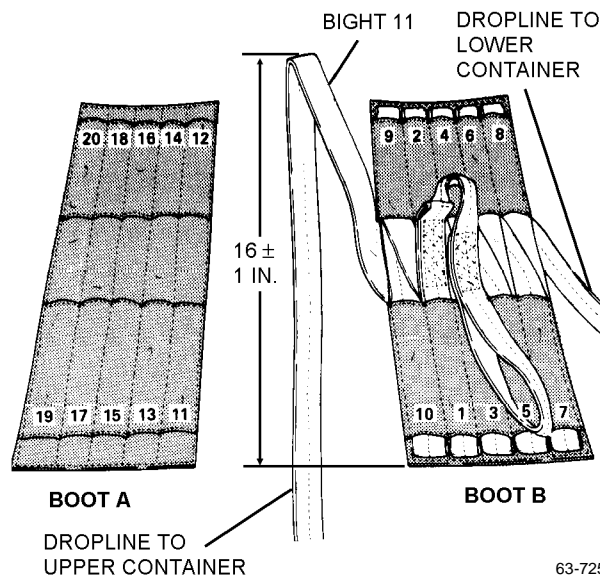


Step 7 - Para 10-24

NOTE

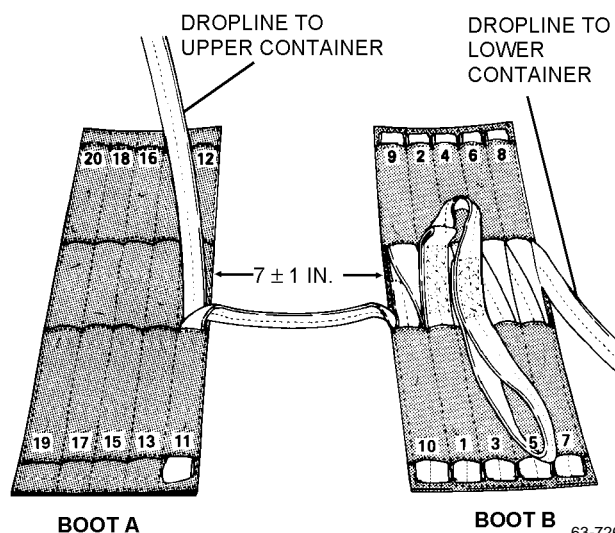
Upon the completion of [step 7](#), identification yarn shall be visible at channels 1, 3, 5, 7 and 10, and shall not show at channels 2, 4, 6, 8 and 9.

8. Form bight 11 in dropline 16 \pm 1 inches from bottom of last bight (bight 10) in boot B.



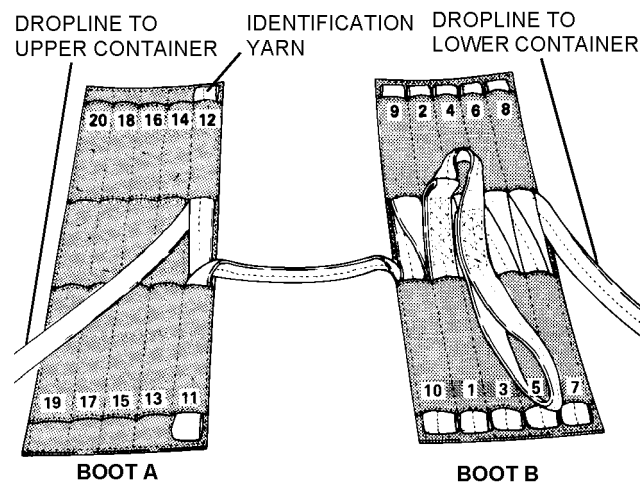
Step 8 - Para 10-24

9. Stow bight 11 (formed in [step 8](#)) in channel 11 of boot A. There shall be 7 \pm 1 inches of dropline between boots A and B when bight 11 is stowed. Identification yarn shall not show at protrusion.

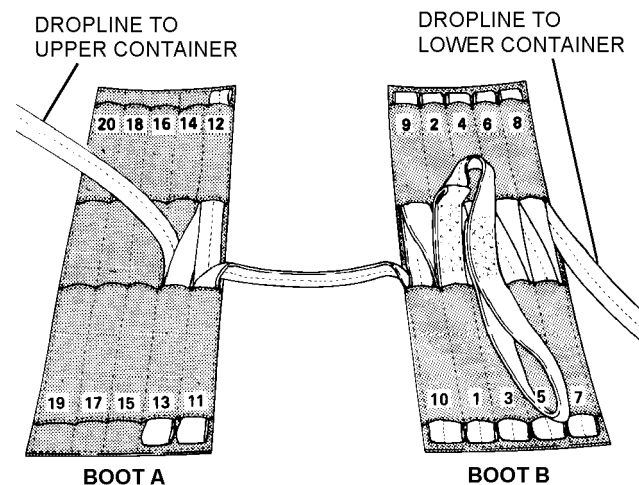


Step 9 - Para 10-24

10. Stow bight 12 in channel 12 of boot A. Identification yarn shall be visible at protrusion.



11. Stow bight 13 in channel 13. Identification yarn shall not show at protrusion.



Step 11 - Para 10-24

12. Continue stowing bights in boot A until all line is stowed. Maintain 1/2-inch protrusion ([figure 10-9](#)).

Step 10 - Para 10-24

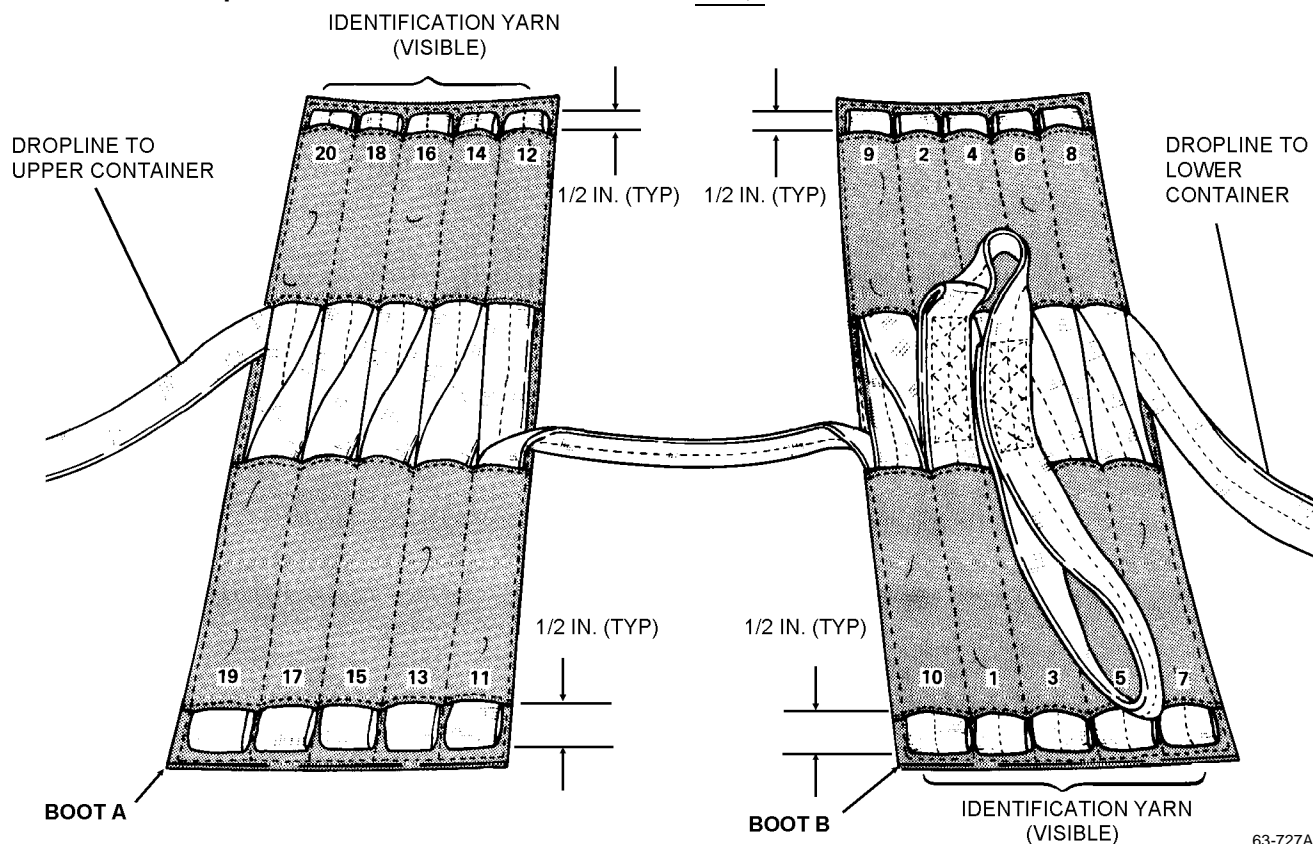


Figure 10-9. Stowage of Dropline

NOTE

Upon the completion of [step 12](#), identification yarn shall be visible at channels 12, 14, 16, 18, and 20, and shall not show at channels 11, 13, 15, 17, and 19.

10-25. LIFERAFT PREPARATION, FOLDING, RIGGING AND PACKING. To prepare, fold, rig, and pack the LR-1 liferaft, proceed as follows:

Materials Required

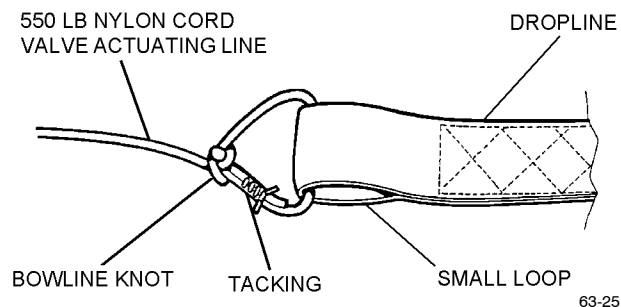
Quantity	Description	Reference Number
As Required	Powder, Talcum	MIL-T-50036 NIIN 01-080-9589
As Required	Thread, Nylon, Waxed, Size E	MIL-C-5040 NIIN 00-240-2146 (or equivalent)
As Required	Cord, Nylon, 550-pound, Type III	V-T-295 NIIN 00-244-0609 (or equivalent)

NOTE

If the valve actuating line is damaged, incorrectly installed, or not installed, install new line in accordance with [steps 1 and 2](#).

1. Cut 15-inch length of 550-pound Type III nylon cord (MIL-C-5040) and sear ends.

2. Route one end through small loop on dropline and tie bowline knot. Tack with three turns of waxed, size E nylon thread (V-T-295), single. Tie ends with, surgeon's knot followed by a square knot.



Step 2 - Para 10-25

3. Lay raft assembly flat with inside up and bow to the right.

4. Ensure all trapped air is expelled from raft, and oral inflation valve is locked and stowed in pocket.

5. Lightly dust entire raft with talcum powder (MIL-T-50036).

6. Secure sea anchor line in 3-inch bights. Fold and stow sea anchor and line in sea anchor pocket.

7. Position raft aft of lower container assembly.

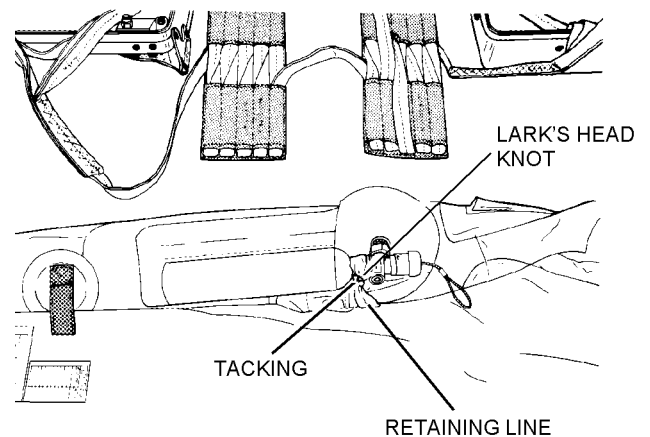
WARNING

Gas under pressure. Do not loosen or attempt to remove inflation valve assembly from carbon dioxide cylinder.

NOTE

Ensure the CO₂ cylinder is in its stowage pocket and the inflation valve is disconnected from the raft. Ensure the anti-chafing disc is in position on the inlet check valve.

8. Attach raft retaining line to cylinder with a lark's head knot. Pull knot tight and tack with two turns of waxed nylon 6-cord, single. Tie ends with surgeon's knot followed by a square knot.



63-951

Step 8 - Para 10-25

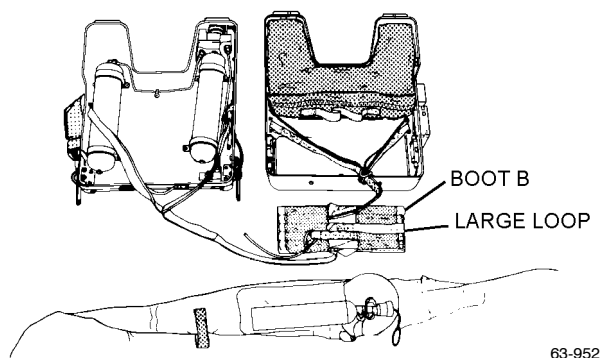
NAVAIR 13-1-6.3-2

9. Accordion fold remainder of raft retaining line and stow in raft retaining line pocket. Close pocket closure tab and secure hook and pile tape.

NOTE

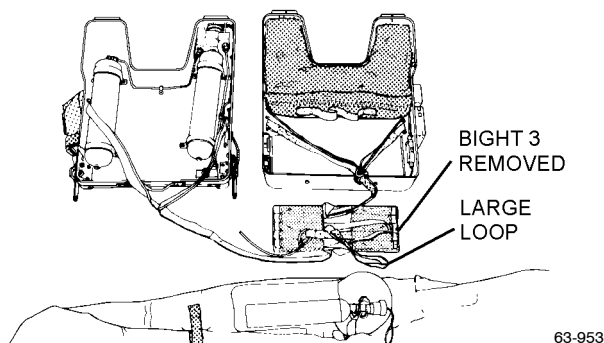
When repositioning boots, it may be necessary to move upper container. Make adjustments as necessary.

10. Position boot B on top of boot A and place boots between raft and lower container with large loop of dropline facing up and to the right.



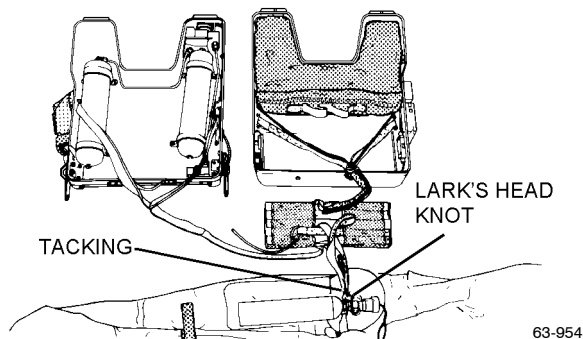
Step 10 - Para 10-25

11. Remove bight from channel 3, boot B.



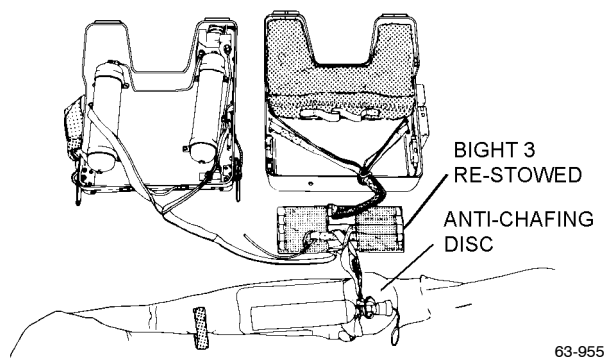
Step 11 - Para 10-25

12. Attach large loop of dropline around neck of cylinder with a lark's head knot. Pull knot tight and tack with two turns of waxed nylon 6-cord, single. Tie ends with a surgeon's knot followed by a square knot.



Step 12 - Para 10-25

13. Ensure CO₂ cylinder anti-chafing disc is installed. Attach inflation valve to liferaft inlet valve and tighten coupling nut to a torque valve of 80 to 90 in-lbs. Stow bight removed from channel 3 of boot B. Bight will not extend full length of channel.

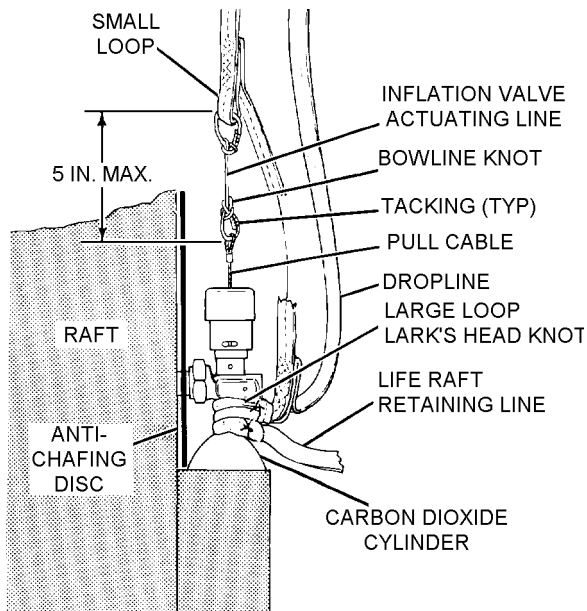


Step 13 - Para 10-25

WARNING

Final dimension of valve actuating line is critical. Finished length shall not exceed 5 inches.

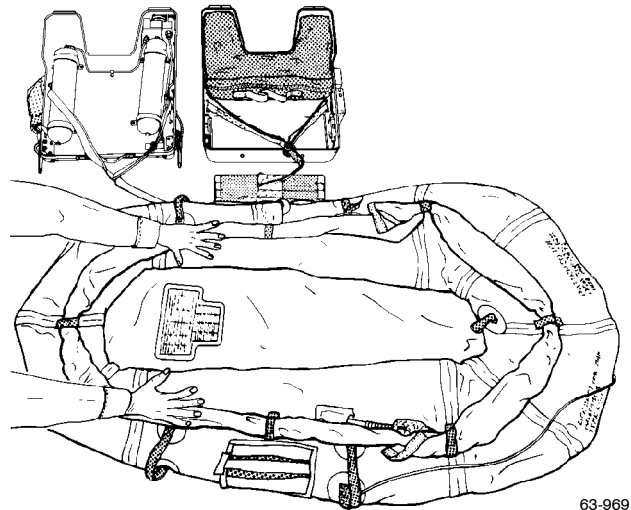
14. Pass valve actuating line through loop in end of pull cable and tie with a bowline knot. Tack with three turns of waxed size E nylon thread, single. Tie ends with surgeon's knot followed by square knot. Finished length shall not exceed 5 inches.



63-358A

Step 14 - Para 10-25

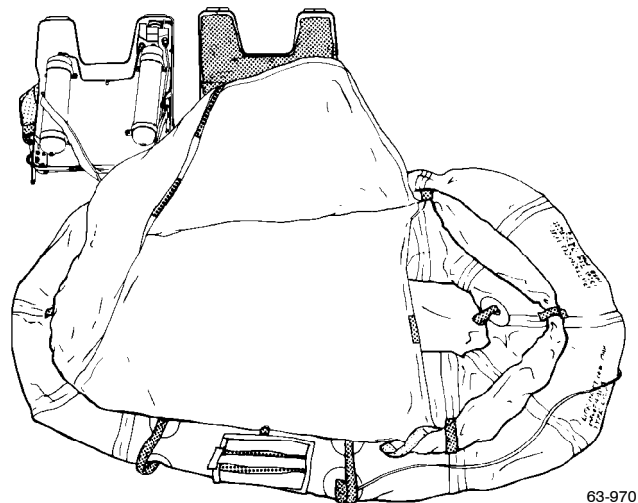
15. Flatten all areas of the raft by hand as much as possible.



63-969

Step 15 - Para 10-25

16. Unfold weathershield on stern end of raft. Fold one end over and obtain the flattest configuration possible.

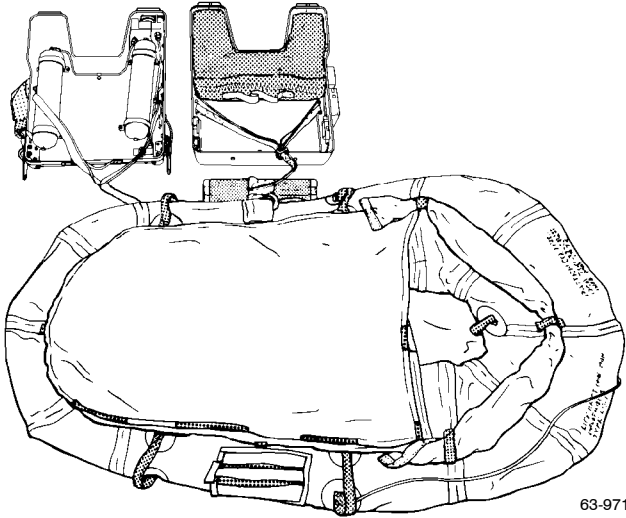


63-970

Step 16 - Para 10-25

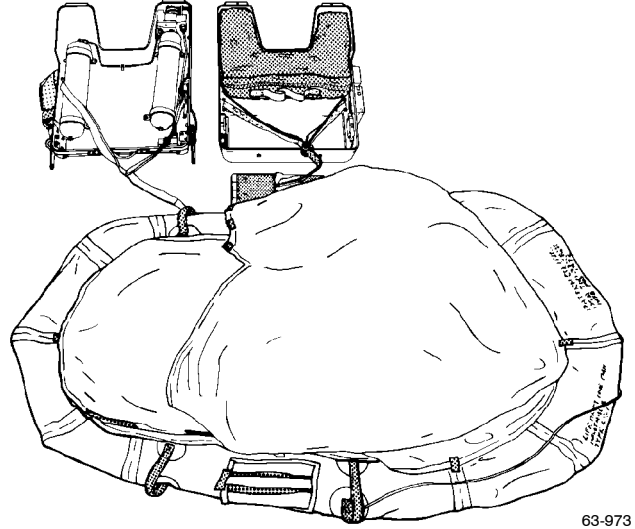
NAVAIR 13-1-6.3-2

17. Fold opposite end over onto previously folded portion. Flatten and remove wrinkles to obtain flattest configuration.



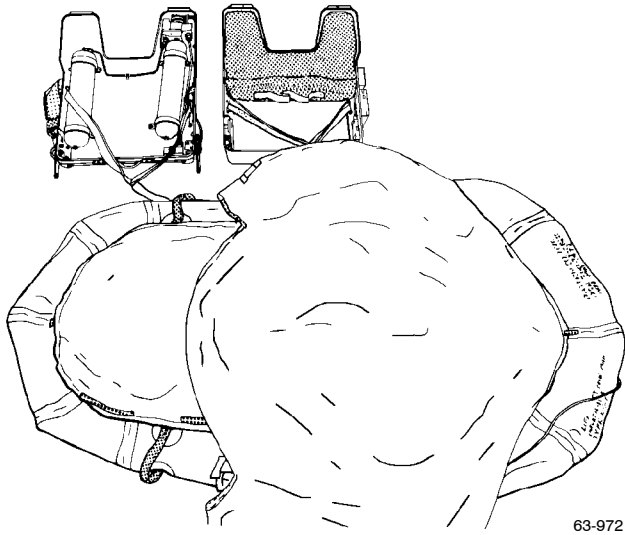
Step 17 - Para 10-25

19. Fold one side under to the approximate width of the folded portion of weathershield at the stern end of raft.



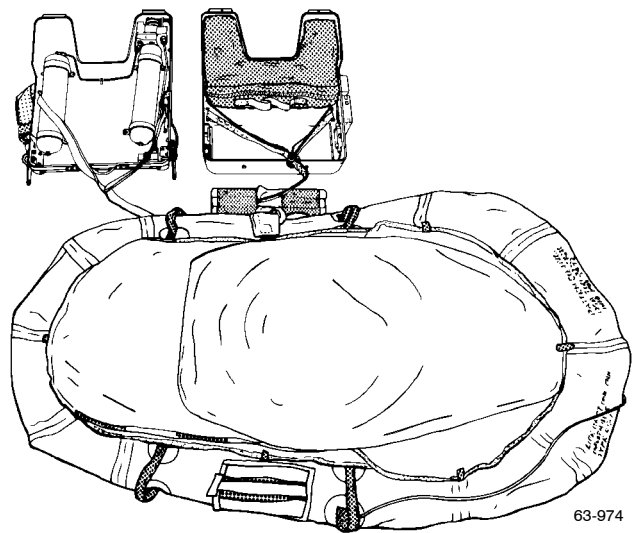
Step 19 - Para 10-25

18. Unfold weathershield on bow end of raft.



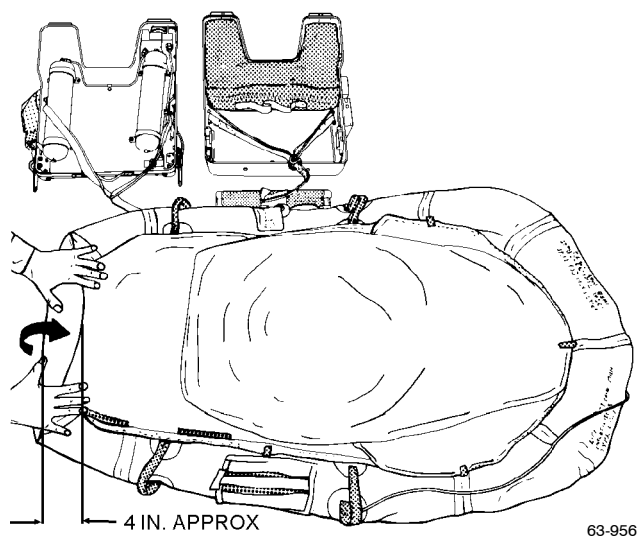
Step 18 - Para 10-25

20. Fold the opposite end under in same manner.



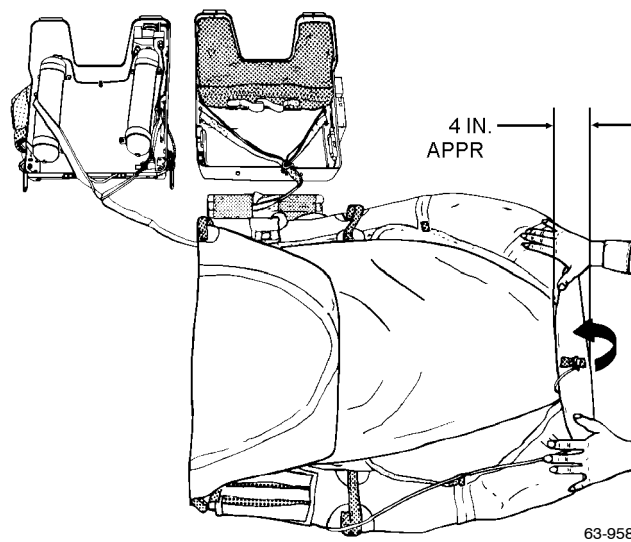
Step 20 - Para 10-25

21. Fold stern of raft over approximately 4 inches.



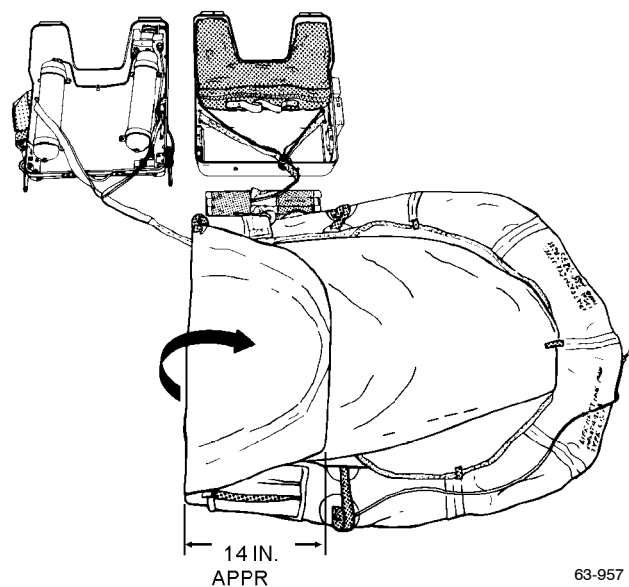
Step 21 - Para 10-25

23. Fold bow of raft over approximately 4 inches.



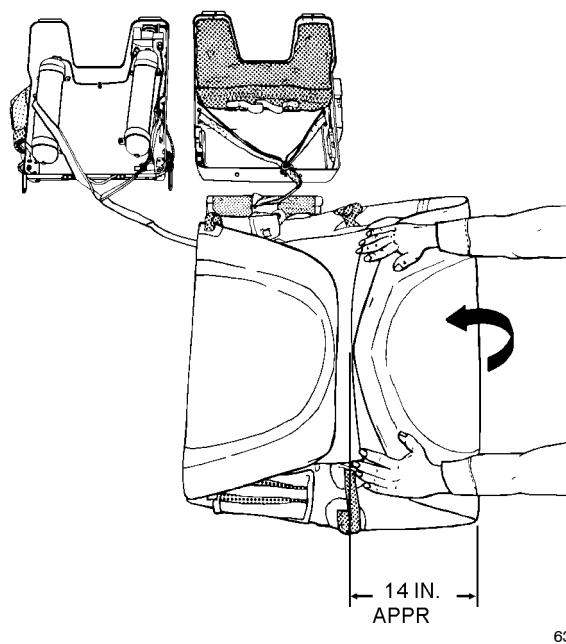
Step 23 - Para 10-25

22. Fold stern once again, making an approximate 14-inch dimension.



Step 22 - Para 10-25

24. Fold bow over again, making an approximate 14-inch dimension.

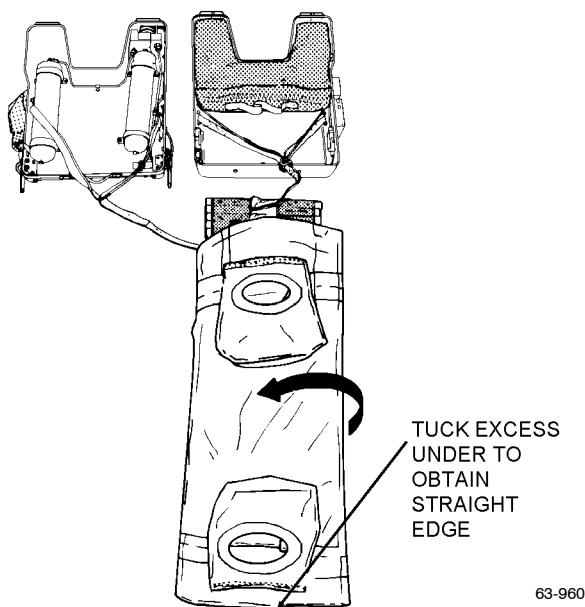


Step 24 - Para 10-25

NOTE

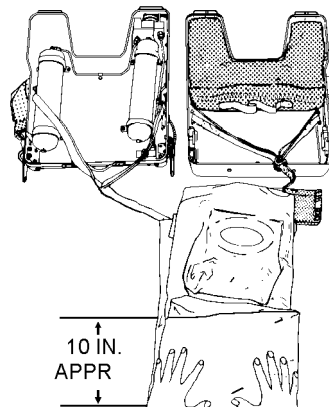
Width of folded raft must not exceed width of raft cover. Adjust as necessary.

25. Fold bow over stern. Tuck excess raft material under to form a straight edge. Fold and flatten ballast bags. Ensure width of folded raft is not greater than width of raft cover.



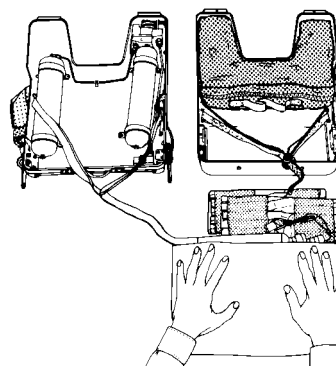
Step 25 - Para 10-25

26. Starting at edge away from container, make an approximate 10-inch fold.



Step 26 - Para 10-25

27. Rotate CO₂ cylinder over and position on top of raft. Fold raft over and butt fold against cylinder. Top fold and top of cylinder should be approximately the same height.

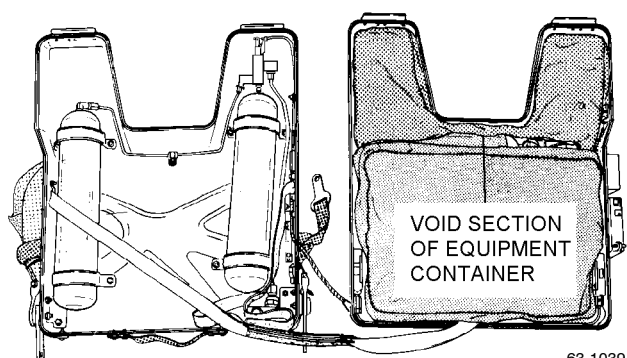


Step 27 - Para 10-25

NOTE

If it becomes necessary to retain the raft in the folded position for any length of time, a liferaft packing aid may be fabricated in accordance with [paragraph 10-74](#), or the liferaft cover may be used to retain the raft in the folded condition.

28. Grasp dropline boots and folded raft assembly and place in aft section of lower container. Inflation assembly should rest on top of boot B and butt against void section of equipment container.



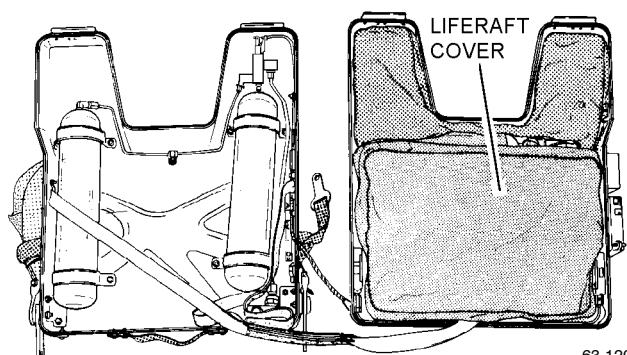
63-1039

Step 28 - Para 10-25

NOTE

Raft adjustment may be required at this point to obtain flattest condition.

29. Place cover over raft. Tuck in completely around raft. Ensure raft material does not extend beyond cover, and cover does not extend beyond edges of container.



63-120

Step 29 - Para 10-25

10-26. CLOSING CONTAINER. To close the container, proceed as follows:

NOTE

Top section of dropline may be laid on top of raft cover after packing.

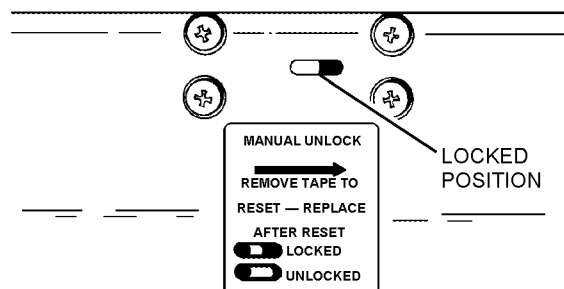
1. Insert release handle into latching mechanism before latching two sections of survival kit.

2. Engage hinge assemblies on lid with hinge assemblies on lower container.

3. Check latches for obstructions.

4. Press lid firmly down onto lower container.

5. Verify positive latching by viewing engagement of latches through inspection ports on each side of lower container and comparing with instruction label.



63-975

Step 5 - Para 10-26

6. Perform release handle pull test and inspection.
Refer to [paragraph 10-27](#).

7. Charge oxygen system in accordance with [paragraph 10-40](#).

8. Remove plug (99, [figure 10-24](#)).



If reducer cam has been twisted or forced beyond vertical (cocked) position, carefully reposition reducer cam. If cables/terminal balls are not properly positioned, open SKU-12/A and position cables so that reducer cam is free to move.

9. Using flashlight, visually inspect position of reducer cam (1, [figure 10-26](#)); ensure reducer cam is in vertical (cocked) position relative to reducer. Also, check position of actuation cables and terminal balls (59, 93 and 91, [figure 10-24](#)); ensure cables are not wrapped around reducer cam and/or terminal balls are not jammed against inside of kit lid.

10. Reinstall plug removed in [step 8](#).

11. If required, close kit in accordance with [steps 1 through 6](#).

12. Ensure emergency oxygen manual release handle is properly secured so that ring portion protrudes into open space to the right (inside) of the left thigh support portion of the kit. The ring shall be readily visible after thigh pad installation.

13. Attach cushion and thigh pads to container lid.

14. Make necessary entries on appropriate form in accordance with OPNAVINST 4790.2 Series.

10-27. RELEASE HANDLE PULL TEST AND INSPECTION. To perform the release handle pull test, proceed as follows:

Materials Required

Quantity	Description	Reference Number
16 inches	Cord, Nylon, Type I	MIL-C-5040 NIIN 00-240-2154 or equivalent
As Required	Sealing, Locking and Retaining Compound Grade B, Type B	MIL-S-22473 NIIN 01-163-2339 (Note 1)

Notes: 1. Use any contrasting color.

Support Equipment Required

Quantity	Description	Reference Number
1	Dial Push/Pull Gage, 0 to 50 Pounds	DPPH50 (CAGE 11710) NIIN 00-473-0108 or equivalent

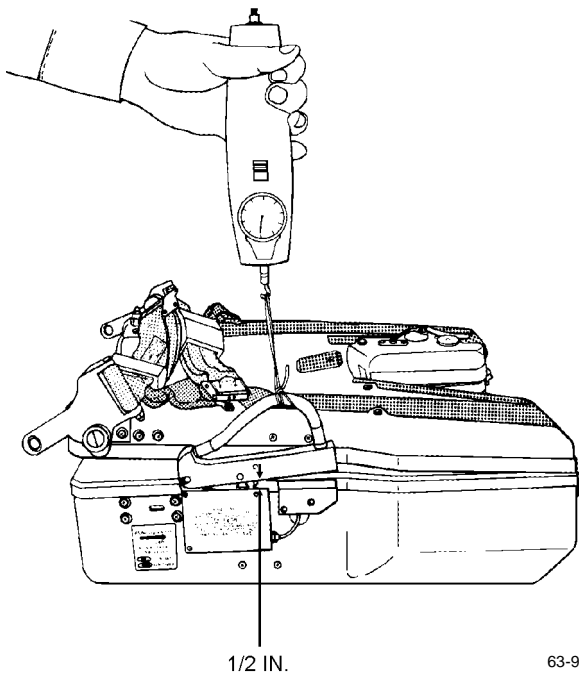
1. Sear each end of the 16 inch nylon cord. Fold the cord in half and tie a binders knot with loose ends. Attach the cord to the release handle at a point approximately 4 1/2 inches forward of the handle pivot point using a larks head knot. Attach the hook on the push/pull gage to the cord.

NOTE

Do not exert downward pressure in the latch area while performing pull test. If necessary to steady kit, place hand in center of kit. Use minimum pressure.

The length of travel of the release handle must be measured while performing the pull test.

2. Apply a steady upward pull and note force required to unlock latches. Force required to unlock latches in the first 1/2 inch of travel, measured at the engagement link, shall be 10 to 30 pounds, and the handle shall pull free of the engagement link. If release assembly fails the test, refer to [table 10-7](#) to determine probable cause and remedy.



Step 2 - Para 10-27

3. Remove push/pull gage. Leave nylon cord attached as it will be needed to perform the release handle integrity test in accordance with [paragraph 10-28](#).

4. Inspect release handle for deterioration, corrosion or other damage in accordance with [table 10-8](#). If screws on outside coverplate of release handle assembly are loose apply sealing compound (MIL-S-22473) to end two threads and replace.

5. Proceed to [paragraph 10-28](#) for the release handle integrity test.

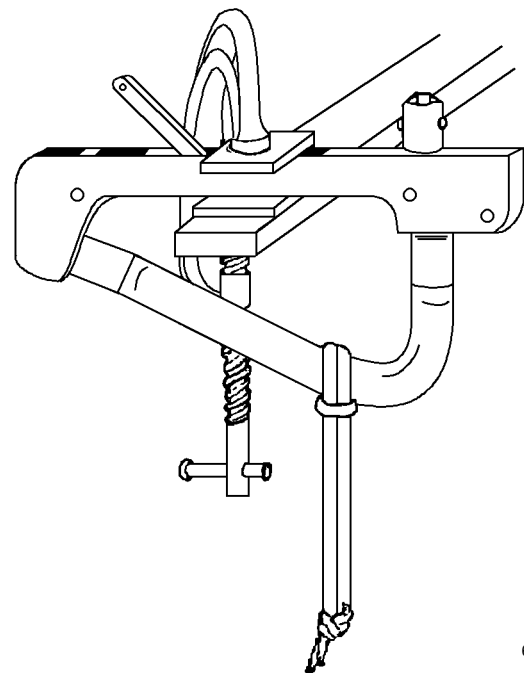
10-28. Release Handle Integrity Test. To perform the release handle integrity test, proceed as follows:

Support Equipment Required

Quantity	Description	Reference Number
1	Dial Push/Pull Gage, 0 to 50 Pounds	DPP-50 (CAGE 11710) NIIN 00-880-7583 (or equivalent)
1	1" x 1" x 12" Bar Stock	Common Shop Equip
2	1" x 1" x 1/4" Wood Stock	Common Shop Equip
1	4" C-Clamp	Common Shop Equip

1. Clamp a section of the 1" x 1" x 12" bar stock into bench vice with approximately 4 inches protruding over bench edge. Place a 1" x 1" x 1/4" wood stock on top of the bar stock near protruding end.

2. Mount handle assembly on wood and bar stock with rubber of handle facing down. Place the second 1" x 1" x 1/4" wood stock on top of release handle. Using 4 inch "C" clamp, fasten base of handle to overhanging end of bar stock as shown.



Step 2 - Para 10-28

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3. Attach Push/Pull gage at opposite end of lark's head and pull until 50 pounds is read on gage. Do not exceed 50 pounds of force on handle assembly.

4. If inner steel cable fails, remove from test set-up and replace with a new release handle. Test the new release handle assembly in accordance with [paragraphs 10-27 and 10-28](#). Report all discrepancies to the Cognizant Field Activity for Seat Survival Kits.

5. If inner steel cable does not fail, remove nylon cord from release handle.

6. Reinstall release handle in release mechanism to reset latches. Close lid.

7. Check for proper engagement of latches through inspection ports.

10-29. DELETED

Figure 10-10. Deleted

Figure 10-11. Deleted

Section 10-4. Turnaround/Daily/Preflight/Postflight/Transfer/ Special/Conditional Inspection

10-30. GENERAL.

10-31. The Turnaround/Daily/Preflight/Postflight or Transfer Inspections consist of a visual type inspection performed in conjunction with the aircraft inspection requirements for the aircraft in which the survival kit is installed. These inspections shall be performed by line personnel (plane captain) or delegated aircrewmembers who have been instructed and found qualified by the Aviator's Equipment Branch.

10-32. The Conditional Inspection is an unscheduled inspection required as the result of a specific situation or set of conditions, e.g., hard-landing inspections or any inspection directed by higher authority that is not ordered in a technical directive. Completion and date of inspection shall be documented by making necessary entries on appropriate form in accordance with OPNAVINST 4790.2 Series.

10-33. The Special (7/14 day, etc.) Inspection shall be performed on in-service survival kits installed in aircraft and in ready room issued. This inspection shall be performed at the Organizational Level of maintenance by personnel assigned to the Aviator's Equipment Branch. Completion and date of inspection shall be documented by making necessary entries on appropriate form in accordance with OPNAVINST 4790.2 Series.

10-34. TURNAROUND/DAILY/PREFLIGHT/POST-FLIGHT/TRANSFER AND SPECIAL INSPECTION PROCEDURES. Each of these inspections consist of a visual inspection of the following:

1. Seat kit fit in ejection seat bucket.
2. Release handle for proper seating and corrosion.
3. Cushion for secure attachment, rips, tears, and loose or frayed stitching.
4. Remove left side thigh support cushion and reducer cam access plug (98, [figure 10-24](#)). Using flashlight, visually inspect position of cam; ensure cam is in vertical (cocked) position relative to reducer. Also, check cables/cable balls for proper routing and engagement; ensure cable balls are not jammed against lid of kit.

5. Check oxygen gauge for FULL indication.
6. Replace access plug and thigh support cushion.
7. Harness assemblies for loose or frayed webbing, stitching, and cracked or broken hardware.
8. Lapbelt release assembly for loose or missing screws and corrosion.
9. Manual emergency oxygen release and cable for condition and security of attachment.
10. Automatic emergency oxygen lanyard coupling assembly for spring security. Ensure that cable coupling has not separated from cable.
11. Automatic emergency oxygen lanyard for secure attachment to personnel service disconnect block.
12. Container assembly for cracks, breaks, and other obvious damage.
13. Beacon actuator indicator for bent shaft, hair-pin cotter for elongation and corrosion, and proper mousing.
14. Secure attachment of beacon automatic actuation lanyard to aircraft deck.
15. Secure attachment of negative g-lock.

16. Condition of oxygen hose and secure attachment to kit. If repair procedure has been performed on oxygen hose assembly, check external wiring for secure attachment.

10-35. If discrepancies are found or suspected, Maintenance Control shall be notified.

10-36. Survival kits which do not pass inspection and cannot be repaired in the aircraft shall be removed in accordance with applicable aircraft manual and replaced with a Ready For Issue (RFI) survival kit. Non-RFI survival kits shall be forwarded to the nearest maintenance activity having repair capability for corrective action.

Section 10-5. Acceptance/Phased/SDLM/PDM Inspection

10-37. GENERAL.

10-38. An Acceptance Inspection shall be performed on a survival kit when it is placed into service or at the time a reporting custodian accepts a newly assigned aircraft from any source, and on return of an aircraft from SDLM/PDM or other major D-level rework. The Phased/SDLM/PDM Inspection cycle of the survival kit shall be 448 days for the F-14 aircraft and 364 days for the EA-6B aircraft. In no case, however, shall the phased interval exceed 448 days for the F-14 aircraft and 364 days for the EA-6B. The battery test inspection cycle for the AN/URT-33A Radio Beacon is dependent upon the type of the battery installed. Refer to NAVAIR 16-30URT33-1 for battery test inspection cycles and requirements. For acceptance inspection purposes, verification of pyrotechnics and configuration is accomplished by visual record examination only. Disassembly beyond the daily inspection requirements of applicable publications is not required. Activities may elect to increase the depth of inspection if equipment condition, visual external inspection, or record examination indicates such action is warranted.

10-39. VISUAL INSPECTION. This inspection shall be performed prior to the functional check of the kit. Visually check kit for the following:

1. Cushion for rips, tears, loose or frayed stitching, and general condition.
2. Surface unclean, rough, misaligned, or container cracks, nicks, or other flaws.
3. Condition and security of hook and pile tape.
4. Release handle for wear, corrosion, and damage.
5. Webbing for cuts, loose or frayed stitching, and security of attachment.
6. Lapbelt release assembly for loose or missing screws and corrosion.
7. Hoses for cracks and deterioration.
8. Material imperfections, foreign matter embedded, burrs or sharp edges inside and outside kit, or other faulty workmanship.

9. Any component loose or otherwise not securely retained.

10. Any functioning part that operates with difficulty.

11. Evidence of oil preservatives or hydrocarbon materials on emergency oxygen system components or hoses.

12. Markings (missing, insufficient, incorrect, illegible, not permanent).

13. Cable assemblies for rust or corrosion.

14. Swaged balls on cable assemblies for security of attachment.

15. Negative-g lock striker fitting and backplate for secure attachment.

16. Condition of upper container lid lock surfaces.

10-40. FUNCTIONAL CHECK. The functional check shall be performed any time a kit is placed in service, after any adjustment procedures, or when equipment condition, visual external inspection, or record examination indicates such action is warranted to determine the condition of the kit. To perform a functional check, proceed as follows:

Materials Required

Quantity	Description	Reference Number
As Required	Leak Detection Compound, Type I	MIL-L-25567
As Required	Lint-free Cloth	MIL-C-85043 NIIN 00-044-9281

Support Equipment Required

Quantity	Description	Reference Number
1	Test Stand	59A120 (CAGE 02551) or 31TB1995-1 (CAGE 99251)
1	Dial, Push/Pull Gage, 0-50 Pounds	DPPH50 (CAGE 11710) NIIN 00-473-0108
1	Cam Reset Tool	—

CAUTION

Discontinue functional test if seat kit fails to pass any steps of test procedures. Repair malfunction before continuing procedures or damage to seat kit may result. After repair, the entire test procedure shall be performed.

NOTE

Performance of, and test results produced by a test stand depends largely upon the skill of the operator. Therefore, operators shall be thoroughly familiar with instruments, controls, and connections that comprise systems incorporated in the test stand. Refer to NAVAIR 17-15BC-20 and NAVAIR 13-1-6.4-4 for details of the 59A120 or 31TB1995 series liquid oxygen converter test stands.

Emergency oxygen cylinder pressures used in this functional test were derived under ideal shop conditions of 70°F (21°C). Variances in ambient air temperatures directly affect charging pressures. Refer to [table 10-5](#) for details.

Ensure that emergency oxygen cylinder is charged to 1800 to 2000 psi.

1. Remove bell jar and connect oxygen outlet hose of kit to fitting (C-1). Ensure that valve (V-2) is open and all other test stand valves are closed ([figure 10-12](#)).

2. Attach push/pull gage to manual emergency oxygen release handle.

Table 10-5. Charging Stages

Stage	PSI
1	500
2	1000
3	1500
4	1800
5	2000

3. Measure force required to disengage manual oxygen release. Force required shall be 10 to 30 pounds and emergency oxygen system shall actuate and indicate 45 to 80 psi on test stand gage (PG-1).

4. Reset reducer assembly.

5. Turn on oxygen supply cylinder to test stand.

6. Slowly open valve (V-6) on test stand and adjust pressure on gage (PG-1) to 90 psi.

7. Measure the force required to disengage the manual oxygen release using push/pull gage. Force required shall be 10 to 30 pounds.

WARNING

Do not use leak detection compound which is not clear and free of suspended material/sediment or which has peculiar odors such as acetone or alcohol. Compound having any of these characteristics is considered contaminated and shall be disposed of.

8. Use leak detection compound to check all pressure lines and fittings on survival kit to ensure no leakage.

NOTE

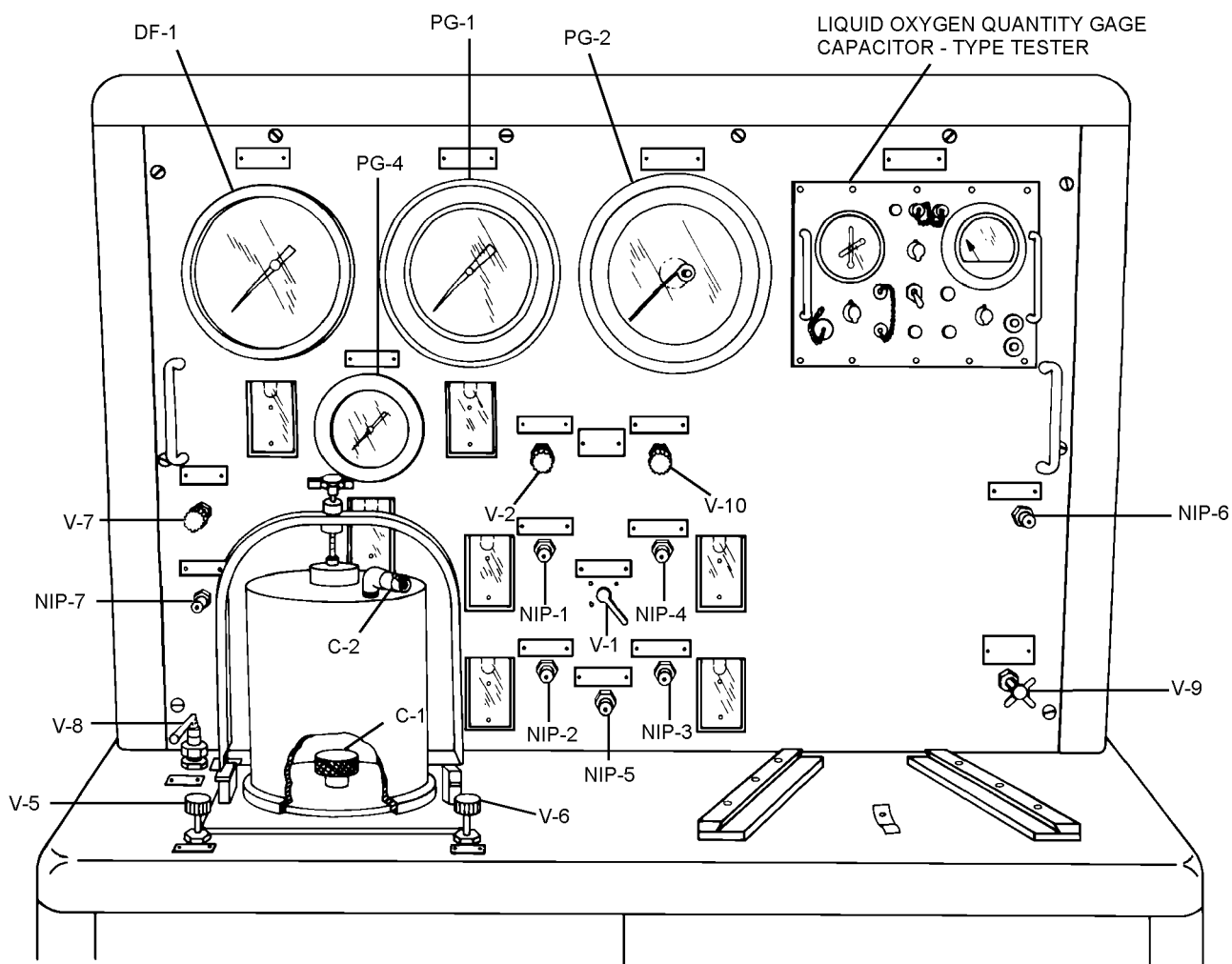
Any degree of leakage in the oxygen system requires corrective maintenance.

9. Reset reducer assembly.

CAUTION

Do not increase pressure above 150 psi.

10. Using valve (V-6) increase pressure until relief valve unseats.



C-1	BELL JAR BOTTOM COUPLING	PG-2	FLOWMETER INDICATOR GAGE
C-2	BELL JAR TOP COUPLING	PG-4	0 – 15 PSIG LOW PRESSURE TEST GAGE
DF-1	0 – 100" H ₂ O DIFFERENTIAL PRESSURE GAGE	V-1	FLOWMETER SELECTOR GAGE
NIP-1	0 – 0.25 LPM FLOWMETER CONNECTION	V-2	TEST PRESSURE GAGE TO BELL JAR VALVE
NIP-2	0 – 1 LPM FLOWMETER CONNECTION	V-5	SYSTEM BLEED VALVE
NIP-3	0 – 50 LPM FLOWMETER CONNECTION	V-6	OXYGEN SUPPLY VALVE
NIP-4	0 – 150 LPM FLOWMETER CONNECTION	V-7	DIFFERENTIAL PRESSURE BLEED VALVE
NIP-5	CONVERTER SUPPLY OUTLET CONNECTION	V-8	DIFFERENTIAL PRESSURE SHUT-OFF VALVE
NIP-6	SUPPLY TO CONVERTER CONNECTION	V-9	CONVERTER SUPPLY FLOW CONTROL VALVE
NIP-7	DIFFERENTIAL PRESSURE GAGE CONNECTION	V-10	TEST PRESSURE GAGE BUILD-UP AND FLOW VALVE
PG-1	0 – 160 PSIG TEST PRESSURE GAGE		

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Figure 10-12. Test Stand Model 59A120

NOTE

Unseating can be determined by listening and observing gage (PG-1) on test stand.

11. Repeat [step 10](#) several times to establish a correct pressure. Relief valve shall unseat at 120 to 140 psi when pressure is increased, and reseal at 110 psi minimum when pressure is decreased. Once resealed, relief valve shall be leak tight, (no indication on PG-1 of pressure drop).

NOTE

Pressure may be reduced below opening pressure of the relief valve by closing valve (V-6) and opening valve (V-5).

12. Close valve (V-6) and bleed oxygen pressure from system by opening valve (V-5). All pressure is bled when gages (PG-1) and (PG-4) indicate zero pressure.

13. Close valve (V-5).

14. Ensure valve (V-2) is opened and all other test stand valves are closed.

15. Measure force required to disengage automatic oxygen release with a push/pull gage. Force required shall be 10 to 30 pounds and emergency oxygen system shall actuate and indicate 45 to 80 psi on gage (PG-1) on test stand. Reset reducer assembly.

16. Open valve (V-5), and ensure that all other test stand valves are closed.

17. Actuate cam on reducer to ensure positive flow through valve (V-5). Reset reducer assembly.

18. Open valve (V-8).

19. Slowly close valve (V-5), while observing gage (DF-1).

NOTE

Observe gage (DF-1) for two minutes to ensure no leakage. Any pressure rise indicates leakage in the reducer valve seat and requires corrective maintenance.

20. Close valve (V-8), open valve (V-5), and disconnect oxygen outlet hose from fitting (C-1).

21. Ensure all valves on the test stand are secured.

22. Connect oxygen outlet hose to fitting (NIP-6). Ensure that valve (V-10) is open and all other test stand valves are closed.

23. Connect test stand hose to fitting (NIP-5) and fitting (NIP-4).

24. Move valve (V-1) to the NIP-4 position.

25. Ensure that kit oxygen cylinder is filled with 1800 to 2000 psi.

26. Pull manual oxygen release. Oxygen pressure on gage (PG-1) shall indicate 45 to 80 psi.

27. Slowly open valve (V-9) to indicate 90 LPM on gage (PG-2). Oxygen pressure shall indicate 45 to 80 psi on gage (PG-1).

NOTE

When needle of cylinder pressure gage is between the E and F of REFILL, pressure is approximately 250 psi.

28. Observe emergency oxygen cylinder pressure gage and allow the system to decrease to 250 psi while maintaining 90 LPM flow and 45 to 80 psi pressure.

29. Close valve (V-9).

30. With zero flow indicated on gage (PG-2), pressure indicated on gage (PG-1) shall be 45 to 80 psi.

31. Reset reducer assembly.

32. Bleed oxygen pressure from system by opening valve (V-5) and (V-2). All pressure is bled when gages (PG-1) and (PG-4) indicate zero pressure.

33. Disconnect kit from test stand.

34. Secure test stand.

35. All areas where leak detection compound was applied shall be wiped thoroughly clean. Dry with lint-free cloth, filtered low pressure compressed air, or low pressure nitrogen.

36. Recharge emergency oxygen cylinder with 1800 to 2000 psi. Refer to [paragraph 10-41](#) for charging procedures.

10-41. PURGING AND CHARGING EMERGENCY OXYGEN SYSTEM. To purge and charge the emergency oxygen system proceed as follows:

Materials Required

Quantity	Description	Reference Number
As Required	Leak Detection Compound, Type I	MIL-L-25567
As Required	Nitrogen, Type I, Class 1, Grade B	BB-N-411
As Required	Aviator's Breathing Oxygen, Type I	MIL-O-27210
As Required	Cloth, Lint-free	MIL-C-85043 NIIN 00-044-9281

Support Equipment Required

Quantity	Description	Reference Number
1	Oxygen Purging Electric Heater	—
1	Shut-Off Valve	—
1	Pressure Regulator	—
1	Adapter, Filling (Optional)	21000-T130-1 (CAGE 53655)

WARNING

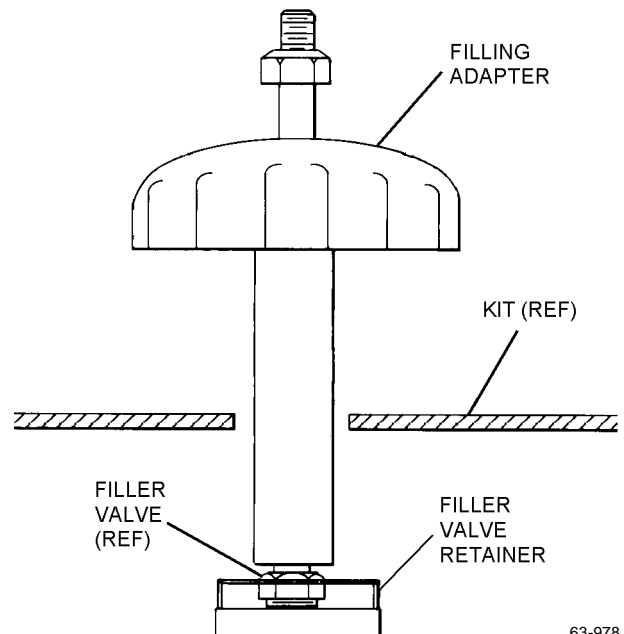
Servicing of emergency oxygen system shall be accomplished only after removal of survival kit from aircraft.

1. If survival kit assembly has not been removed from aircraft, remove in accordance with applicable maintenance manual.

NOTE

Use of filling adapter on SKU-12/A survival kits is optional.

2. Remove oxygen filler valve cap and connect filling adapter to filler valve.



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Step 2 - Para 10-41

WARNING

Do not release oxygen from the emergency oxygen system through filler valve or adapter. Releasing high pressure oxygen through restriction of filler valve will produce heat and may result in fire or explosion.

3. If necessary to deplete emergency oxygen system before purging or filling, release the pressure through the pressure reducer by pulling the emergency oxygen lanyard.

NOTE

If emergency oxygen system is contaminated or system has been empty for more than two hours, purging is required. However, if purging is not warranted, proceed to [step 10](#) for charging procedures.

4. Connect nitrogen source to filling adapter/filler valve, and close pressure reducer.

NOTE

If relief valve on Oxygen Purging Electric Heater will not allow 100 psi, raise pressure only to allowable limit.

5. Slowly pressurize to 100 psi with nitrogen at temperature of 110 to 130 degrees C (230 to 266 degrees F) using electric heater.

6. Turn off nitrogen source and deplete oxygen system.

7. Repeat [steps 5 and 6](#), twice.

8. With pressure reducer open, turn on nitrogen source and purge for 10 minutes at temperature of 110 to 130 degrees C (230 to 266 degrees F).

9. Turn off nitrogen source and disconnect.

10. Connect oxygen source to filling adapter/filler valve with suitable pressure regulator and shut-off valve.

WARNING

When resetting reducer cam ensure reducer cam is in the vertical (cocked) position and ensure cables and cable balls are not wrapped around reducer cam and jammed against inside of kit lid.

11. Reset pressure reducer cam and ensure reducer cam is in the vertical (cocked) position and cables and cable balls are not wrapped around reducer cam and jammed against the inside of the kit lid.

12. Slowly pressurize to 100 psi.

13. Deplete cylinder to 50 psi.

WARNING

Observe filling stages as rapid application of oxygen pressure creates heat which may result in fire or explosion. Allow no less than 3 minutes for each filling stage and 2-minute intervals for cooling between stages.

NOTE

If kit is to be stored, the emergency oxygen bottle shall be depleted or filled to 200 PSI (when needle on gage bisects E of REFILL). For shipping, fill or deplete to 25 PSI using the gage on the oxygen refill cylinder.

14. Charge emergency oxygen system in stages in accordance with [table 10-5](#) until supply pressure gage indicates correct pressure for existing ambient temperature ([table 10-6](#)).

Table 10-6. Ambient Air Temperature Vs Charging Pressures

Ambient Air Temperature		Charging Pressure
°F	°C	PSI
0	-18	1550-1750
10	-12	1600-1775
20	-7	1625-1800
30	-1	1675-1850
40	5	1700-1875
50	10	1725-1925
60	16	1775-1975
70	21	1800-2000
80	27	1825-2050
90	32	1875-2075
100	38	1900-2125
110	43	1925-2150
120	49	1975-2200
130	54	2000-2225

15. Loosen filling adapter (if installed) until all pressure is bled from high-pressure line. Remove filling adapter.

Do not use leak detection compound which is not clear and free of material/sediment or which has peculiar odors such as acetone or alcohol. Compound having any of these characteristics is considered contaminated and shall be disposed of.

NOTE

Alternate Fill Valve P/N 9120097-23 is coreless and has a maximum leakage rate of 1 cc/hr. This will be evident by very tiny bubbles passing through the top of the valve when leak detection compound is applied level to top rim. No leaks around threads are acceptable. If large bubbles are evident, contact survival kit FST for disposition.

16. Examine leak detection compound then apply around connection points of oxygen gage, reducer, and filler valve. Check for leaks. Then thoroughly wipe clean and dry with lint-free cloth, filtered low-pressure compressed air, or low pressure oxygen.

17. Reinstall oxygen filler valve cap on filler valve.

18. If the seat survival kit assembly was removed from the aircraft in [step 1](#), reinstall using the applicable aircraft maintenance manual.

Section 10-6. Maintenance**10-42. GENERAL.****WARNING**

Keep working area clean and free of oil, grease, and dirt. Do not attempt to perform any oxygen system component removal with the oxygen system pressurized.

10-43. This section contains procedures for troubleshooting, disassembly, cleaning, inspection of disassembled parts, repair or replacement of parts, assembly, and adjustment.

NOTE

Disassembly shall be only to extent necessary to perform required maintenance.

10-44. TROUBLESHOOTING.

10-45. When system failure or operating malfunctions are encountered, [table 10-7](#) will provide guidance in determining probable cause and remedy.

10-46. DISASSEMBLY OF SKU-12/A SEAT SURVIVAL KIT.

10-47. Disassemble kit using index numbers assigned to [figures 10-22 through 10-31](#) as a reference. Disassembly shall be only to the extent necessary to perform required maintenance.

Table 10-7. Troubleshooting

Trouble	Probable Cause	Remedy
Low or zero indication.	System empty.	Charge system (paragraph 10-41).
	Defective gage.	Bleed system. Replace gage.
	Leaking components.	Tighten connections or replace.
Relief valve leaking.	Defective valve.	Replace Relief Valve, P/N P103-673.
Relief valve does not operate within tolerance of 120 to 140 psi when simulated pressure is applied during test.	Defective or out-of-adjustment relief valve.	Adjust to meet required specifications (paragraph 10-68). If unable to adjust, replace relief valve.
No oxygen output with pressure reducer actuated.	Defective oxygen gage.	Bleed system, replace oxygen gage.
Oxygen system output pressure not within 45 to 80 psig limits.	Pressure reducer defective or out-of-adjustment.	Bleed system (paragraph 10-41) and adjust pressure reducer (paragraph 10-65).
Pulsating pressure at outlet port.	Pressure reducer defective.	Bleed system (paragraph 10-41) and replace pressure reducer (paragraph 10-60).
Oxygen system leaking; low pressure side of reducer.	Pressure reducer is improperly seated.	Bleed system (paragraph 10-41) and replace seat and long-cam reducer (paragraph 10-60).
Oxygen system leaking; high pressure side of reducer.	Loose or improper attachment of fittings.	Inspect all fittings for proper attachment with leak-tec.
Pressure reducer will not shut off.	Pressure reducer flange assembly out of adjustment.	Bleed system (paragraph 10-41) and adjust pressure reducer (paragraph 10-65).
Pressure reducer does not meet required flows.	Pressure reducer is out of adjustment.	Bleed system (paragraph 10-41) and adjust pressure reducer (paragraph 10-65).
Pull force to actuate emergency oxygen system is not within tolerance of 10 to 30 pounds.	Pressure reducer flange assembly out of adjustment.	Bleed system (paragraph 10-41) and adjust pressure reducer (paragraph 10-65).
	Cable broken.	Replace cable.
	Crushed cable/conduit assemblies.	Replace cable/conduit assembly.
Emergency oxygen does not actuate when manual release is pulled.	Crushed cable/conduit assembly.	Replace cable/conduit assembly.
	Reducer cam forced beyond vertical (cocked) position, canted or turned.	Reposition cam.

Table 10-7. Troubleshooting (Cont)

Trouble	Probable Cause	Remedy
Emergency oxygen does not actuate when manual release is pulled. (cont)	Cable may be wrapped around reducer cam and/or terminal balls jammed against inside of kit lid.	Inspect manual cable assembly and reposition.
		Inspect and adjust the automatic emergency oxygen release (paragraph 10-67).
Emergency oxygen does not actuate when automatic release is pulled.	Cable may be wrapped around reducer cam and/or terminal balls jammed against inside of kit lid.	Inspect and adjust the automatic emergency oxygen actuation (paragraph 10-67).
	Automatic actuation cable out-of-adjustment. Reducer cam forced beyond vertical (cocked) position, canted or turned.	
	Reducer cam forced beyond vertical (cocked) position, canted or turned.	Reposition cam and adjust the automatic emergency oxygen actuation (paragraph 10-67).
Emergency actuation lanyard coupling assembly loose.	Broken or missing spring.	Replace spring.
Loss of aircraft communications.	Broken or misaligned pins and sockets in hose connectors.	Perform electrical check (NAVAIR 13-1-6.3-1).
	Open or short circuit in oxygen hose wiring.	
Kit lid locks fail to release simultaneously	Lid locks out-of-adjustment.	Adjust locks (paragraph 10-66).
Pull force to actuate kit release mechanism is not within tolerance of 10 to 30 pounds.	Obstructions between upper and lower container mating surfaces.	Remove obstruction.
	Improper folding of liferaft assembly.	Refold liferaft assembly.

NOTE

Discard and replace all O-rings, seals, cotterpins, and Teflon sealing tape removed from oxygen connections during disassembly. Discard and replace any threaded inserts, rivets, rubber pads, seals, molding, or hook and pile fastener tape removed during disassembly of kit.

10-48. PRESSURE REDUCER ASSEMBLY. For disassembly and assembly procedures for the pressure reducer assembly, P/N 8720024-1, refer to [paragraph 10-60](#). For troubleshooting refer to [table 10-7](#) and for adjustments refer to [paragraph 10-64](#).

Support Equipment Required

Quantity	Description	Reference Number
1	SKU-12/A Oxygen Pressure Reducer Retainer Tool	—

10-49. CLEANING.

10-50. To clean the disassembled oxygen and non-oxygen components of the kit (except for cushions and fabric components) refer to NAVAIR 13-1-6.4-1.

10-51. CLEANING CUSHIONS AND FABRIC COMPONENTS. Clean seat, thigh support cushions, and all fabric components as follows:

Materials Required

Quantity	Description	Reference Number
As Required	Cleaning Compound	MIL-C-25769
As Required	Detergent, General Purpose	MIL-D-16791
As Required	Lint-free Cloth	MIL-C-85043 NIIN 00-044-9281

10-42 Change 4

NOTE

If using cleaning compound (MIL-C-25769), combine one part compound to three parts water. If using general purpose detergent, follow directions on container.

1. Prepare detergent or cleaning compound (MIL-C-25769) solution.
2. Apply solution to soiled area with spray or sponge.
3. Allow solution to remain on surface for a few minutes, then scrub with soft brush or cloth.
4. Rinse surface thoroughly with water and wipe with cloth or sponge.

NOTE

Repeat [steps 1 through 4](#) until material is clean.

5. Repeat [step 4](#) until material is free of all solution.
6. Allow material to dry thoroughly.

10-52. INSPECTION OF DISASSEMBLED PARTS.

10-53. Inspect disassembled seat survival kit parts for distortion, corrosion, or other damage in accordance with [table 10-8](#). Inspect survival items in accordance with NAVAIR 13-1-6.5, Rescue and Survival Equipment, and NAVAIR 13-1-6.7-2, Aircrew Personal Protective Equipment (Clothing).

Table 10-8. Inspection

Component	Task
Survival Kit (Figures 10-22 and 10-23)	
Cushion Assembly and Thigh Support Cushions	Inspect for fabric damage and loose or broken stitching.
	Ensure that hook tape is firmly attached to cushion assemblies.
	Inspect ventilated cushion coupling for weak spring clip.
Dropline Assembly	Inspect boot for fabric damage and loose, broken or frayed stitching.
	Check dropline for material damage, loose, frayed or broken stitching.
Harness Assembly	Check harness assembly for retention pin damage and presence of locknut.
	Inspect aft-most hole serving as attachment for lug pin for elongation.
	Check webbing for wear, damage and for frayed, broken or loose stitching.
	Inspect adapter for obvious damage, corrosion, and wear.
	<u>Check force required for adjuster to release webbing. Maximum pull force shall not exceed 8 lbs. on yellow webbing tab.</u>
Release Handle Assembly	Check molded grip for cuts and breaks.
Raft Cover	Examine for damaged fabric and loose, broken or frayed stitching.
Equipment Container Assembly	Check slide fastener for security of attachment and trouble-free operation.
	Inspect container material for damage and for loose, broken or frayed stitching.
Survival Items	Inspect in accordance with NAVAIR 13-1-6.5.
Lid Assembly (Figure 10-24)	
Lid Assembly	Inspect for cracks, damage to fiberglass and attached extruded metal lip.
Pile Tape Fasteners	Check all tape fasteners for secure attachment to fiberglass lid
Plug and Cap Assembly	Inspect chain, plug and cap for damage.
	Ensure that chain is securely riveted to plug and cap.
Carrying Handle	Check webbing for wear damage, and for frayed, broken or loose stitching.
Oxygen Cylinders	Inspect end fittings for damage.
	Check cylinders for bulges, cracks, nicks, gouges or scratches which penetrate metal.
Manual Oxygen Release	Inspect handle and cable for obvious defects.

Table 10-8. Inspection (Cont)

Component	Task
Lid Assembly (Figure 10-24) (cont)	
Automatic Oxygen Release	Check cable housing for obvious damage and secure attachment to conduit.
	Inspect knurled end fitting.
	Inspect coupling assembly for spring security.
	Inspect that the coupling assembly has not separated from the rest of the cable.
Cable Assemblies	Check terminal balls for secure attachment on respective cables.
	Examine cables for deformation, broken strands or other obvious defects.
	Check conduits for loose or cracked joints, cracked tubing, flattened, dented or out of round tubing diameters.
Check Valve	Inspect for damaged threads and rounded hexagon flats.
Lid Latches	Check for damage and misalignment.
Manifold Assembly (Figure 10-25)	
Check Valve	Inspect for damaged threads and rounded hexagon flats.
Relief Valve	Inspect for damaged threads and rounded flats.
Manifold Body	Inspect manifold for thread damage.
Reducer Assembly (Figure 10-26)	
Oxygen Gage	Check gage for broken or missing glass and broken or jammed needle.
Filler Valve Assembly	Inspect for damaged threads, rounded hexagon flats and condition of valve core (as applicable).
Long-Cam Reducer	Visually inspect cam resetting slot for galling. Examine pinholes for wear and damage.
Body	Check for gouges and other obvious damage. Inspect threads for damage.
Internal Hardware	Inspect for damage, corrosion and/or defects.
Diaphragm	Examine for pinholes, wear or damage.
Container Assembly (Figure 10-27)	
Lower Container Assembly	Check for cracks and damage to fiberglass and attached extruded metal lip. Ensure that extruded metal lip is secured to fiberglass and there is no separation between parts. If fiberglass is cracked, refer to NAVAIR 01-1A-21 for repair procedures.
Handle Protector	Examine protector for obvious defects and security of attachment.

Table 10-8. Inspection (Cont)

Component	Task
Radio Bracket Assembly	Check bracket for secure attachment to container. Examine hook and pile tapes for security of attachment.
Pile Tape	Check all tape fasteners for secure attachment to fiberglass container.
Pad	Examine pad for general condition and security of attachment.
Lock Assemblies (Figures 10-28 and 10-29)	
Cover	Check for distortion and cracks in areas of holes.
All Locknuts and Nipples	Inspect for cracks and thread damage.
	Check for rounded corners of hexagon flats.
Housing	Inspect holes and threads for damage.
Slide	Check slides for distortion and for damage to ends which engage lid latches.
Conduits and Cables	Check for broken, bent or crushed conduits.
	Inspect cables for damaged or broken strands; check security of terminal balls on cables.
Cable Release Assembly (Figure 10-30)	
Cover	Check for distortion and cracks in area of holes.
Housing	Inspect holes and threads for damage.
Lid Lock Release	Check for damage, corrosion or any other defects.

10-54. REPAIR AND REPLACEMENT.

10-55. REPAIR. Repair of individual components within any assembly is authorized only in accordance with procedures outlined in this manual. All authorized repairs performed shall be documented by making necessary entries on appropriate form in accordance with OPNAVINST 4790.2 Series.

10-56. Repair of Cushion Assemblies. Repair of the cushion assemblies is limited to sewing of loose or open seams, broken stitches, and small rips and tears.

10-57. REPLACEMENT. All individual components that fail to pass inspection shall be replaced except where repair procedure is indicated. Refer to source code listing (SM&R CODE) in the [Numerical Index](#) of the Illustrated Parts Breakdown to aid in determining replaceable components. All adjustable components or assemblies that fail to pass respective tests shall first be adjusted to determine if required specifications can be met.

10-58. (East/West) Replacement of Lapbelt Adjuster. To replace missing or damaged lapbelt adjuster on the restraint harness, proceed as follows:

Materials Required

Quantity	Description	Reference Number
As Required	Adjuster, Lapbelt	P/N 184C100-1 (CAGE 30941)
As Required	Sealing, Locking, and Retaining Compound, Grade A	MIL-S-22473 NIIN 00-081-2339 (Note 1)

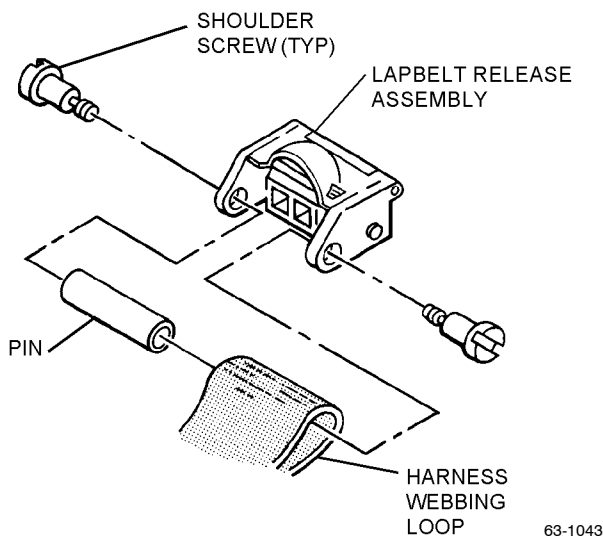
Notes: 1. Use any contrasting color.

NOTE

Replacement procedures can be used on both right and left side restraint harness assemblies.

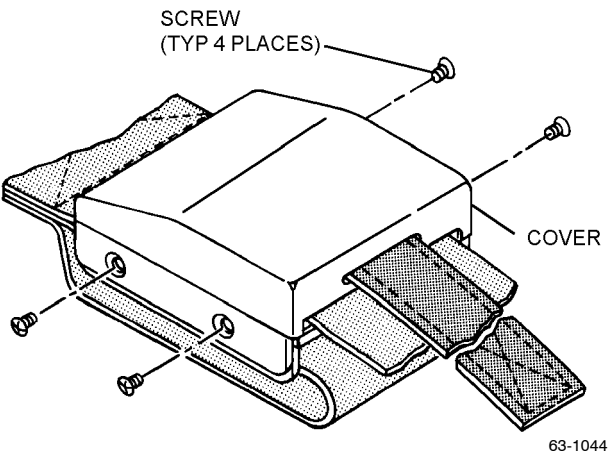
1. Remove existing lapbelt adjuster from restraint harness as follows:

a. Remove lapbelt release assembly by removing two shoulder screws. Pull release assembly away from webbing, and slide pin out of harness webbing loop. Retain all parts.



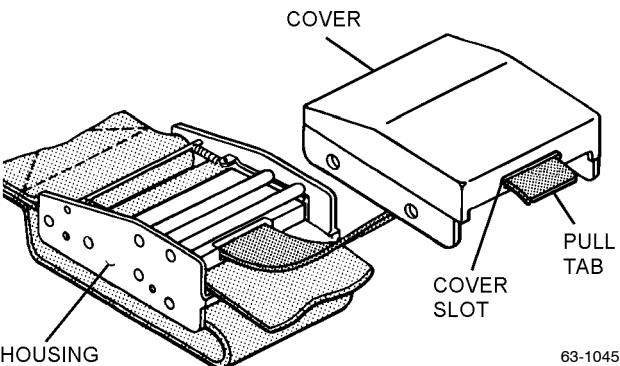
Step 1a - Para 10-58

b. Remove four screws (two on each side) from cover of lapbelt adjuster assembly.



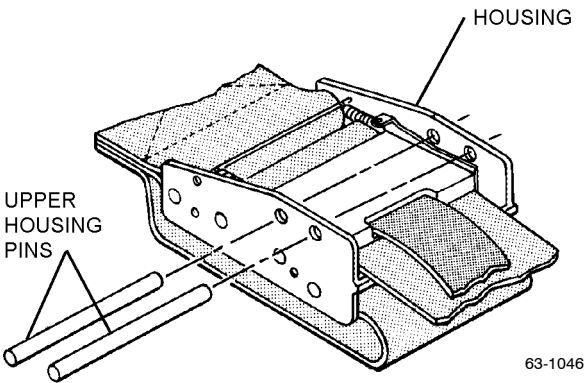
Step 1b - Para 10-58

c. Remove cover from lapbelt adjuster housing, and slide pull tab through cover slot.



Step 1c - Para 10-58

d. Slide upper housing pins out of housing.

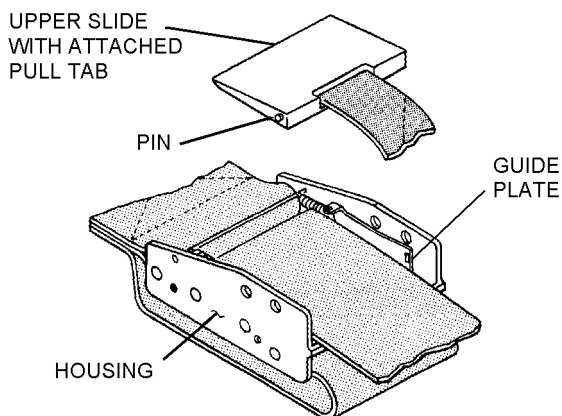


Step 1d - Para 10-58

NOTE

Slides are held to guide plates by pins. Pull slide up so guide plates are above edge of housing, and rotate slide out of guide plates.

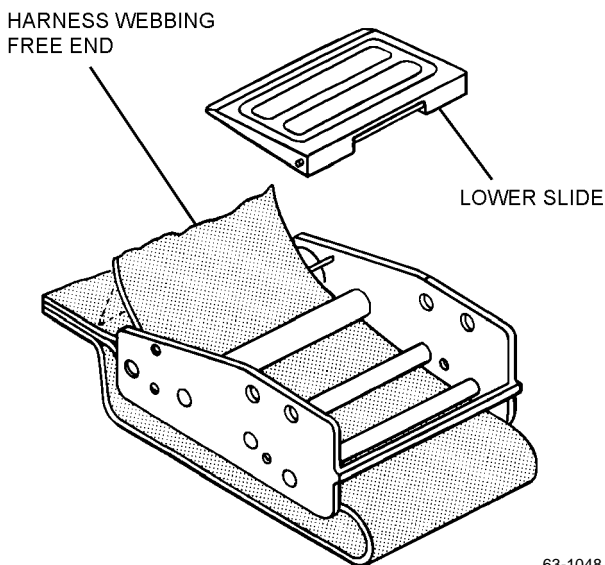
e. Remove upper slide with attached pull tab.



63-1047

Step 1e - Para 10-58

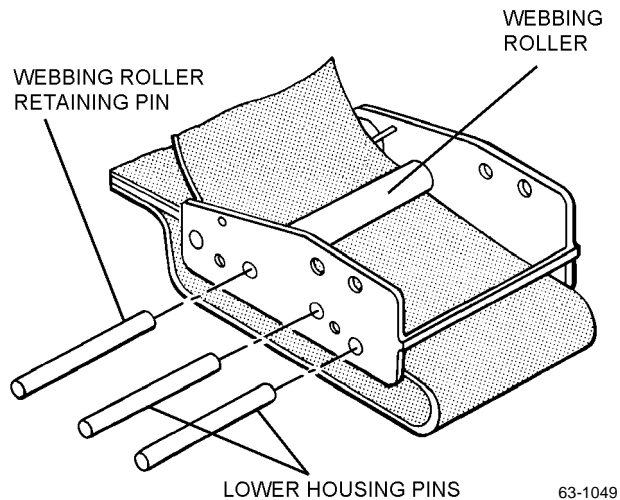
f. Lift free end of harness webbing, and remove lower slide.



63-1048

Step 1f - Para 10-58

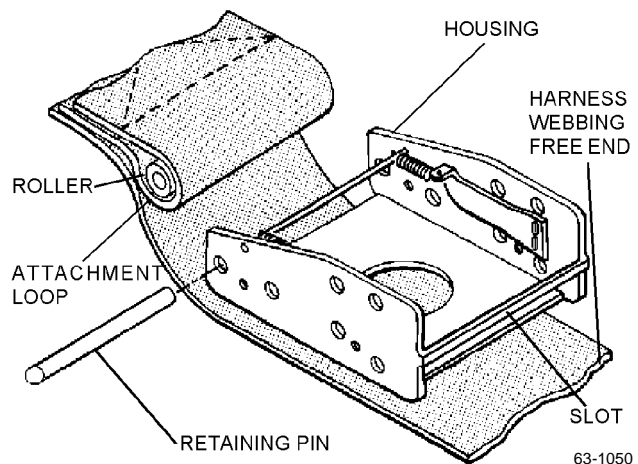
g. Position guide plates up and out of way. Remove two lower housing pins and webbing roller retaining pin. Webbing roller will fall away.



63-1049

Step 1g - Para 10-58

h. Pull free end of harness webbing through slot in housing. Remove pin retaining harness webbing attachment loop roller. Housing will fall away.



63-1050

Step 1h - Para 10-58

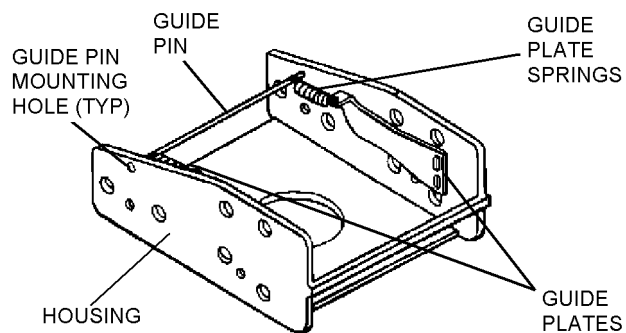
NAVAIR 13-1-6.3-2

2. Install new lapbelt adjuster as follows:

NOTE

The six pins (two retaining and four housing) are interchangeable. The two rollers are also interchangeable.

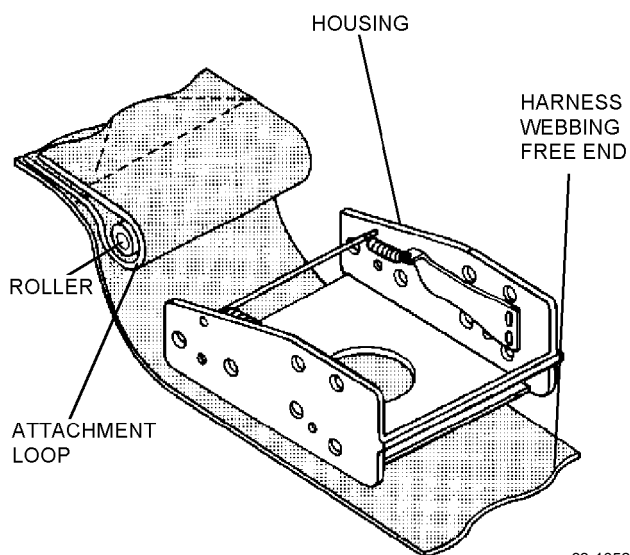
a. If required, slide guide plate springs onto guide pin; ensure guide plates are positioned correctly. Install assembly into adjuster housing guide pin mounting holes.



63-1051

Step 2a - Para 10-58

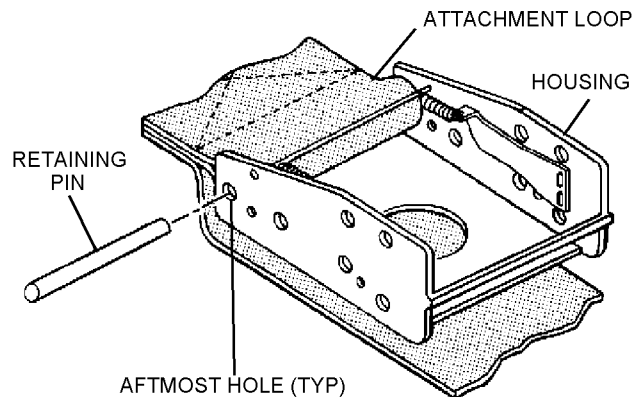
b. Insert roller into attachment loop of harness webbing. Place adjuster housing on top of free end of harness webbing so that aft end of housing faces attachment loop.



63-1052

Step 2b - Para 10-58

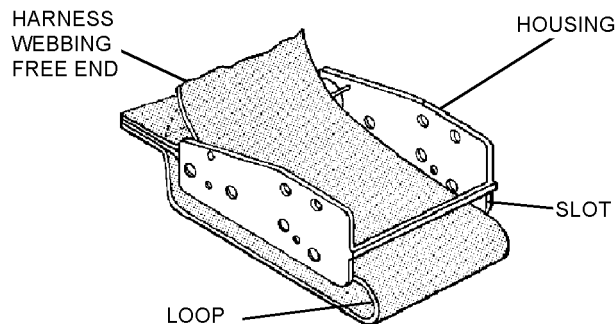
c. Position housing onto attachment loop and roller. Align hole through roller with aftmost holes in housing, and install retaining pin.



63-1053

Step 2c - Para 10-58

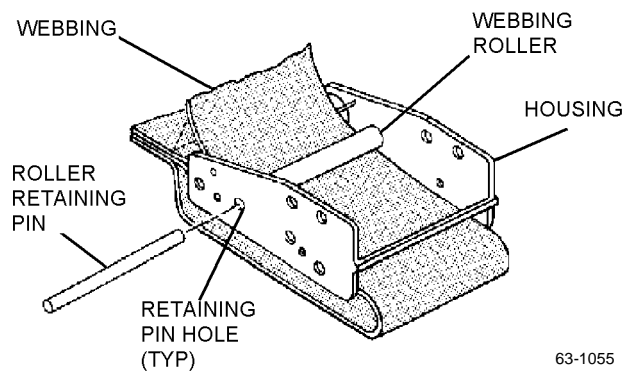
d. Fold free end of webbing back towards housing. Insert end through slot in housing to form loop in webbing forward of adjuster. Guide plates may be positioned up and back to avoid any interference.



63-1054

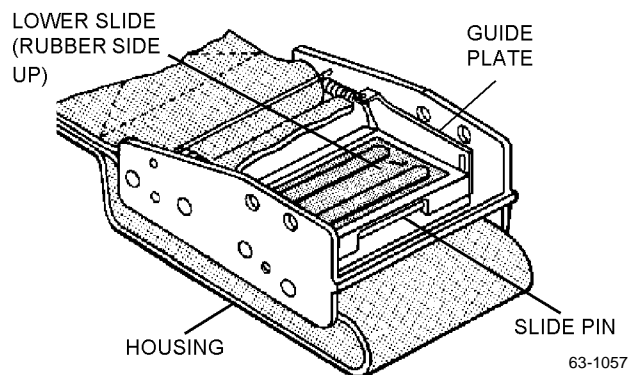
Step 2d - Para 10-58

e. Install webbing roller into housing on top of webbing. Position roller to align with proper holes in housing, and insert roller retaining pin.



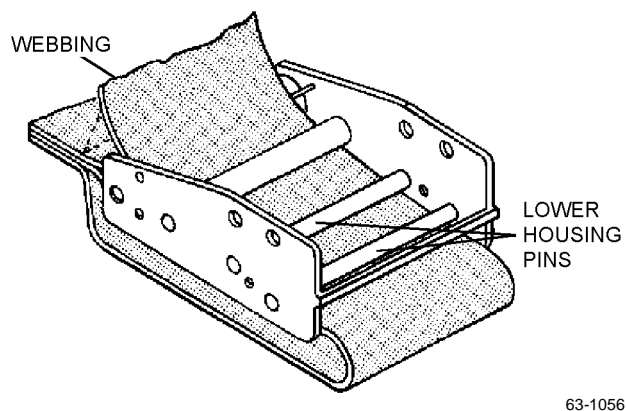
Step 2e - Para 10-58

g. Position guide plates into housing on top of lower housing pins; install lower slide rubber side up. Ensure slide pin is correctly positioned into lower slots of guide plates.



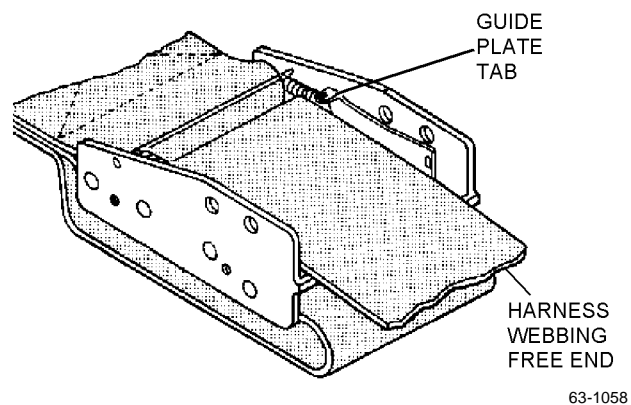
Step 2g - Para 10-58

f. Insert lower housing pins; ensure pins are resting on top of webbing.



Step 2f - Para 10-58

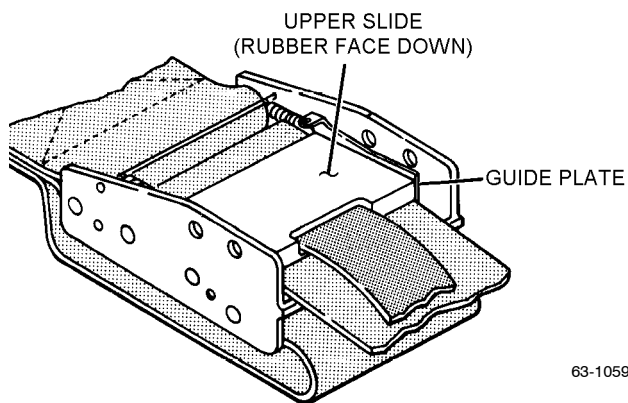
h. Position harness webbing free end under tabs of guide plates, and lay webbing down over lower slide.



Step 2h - Para 10-58

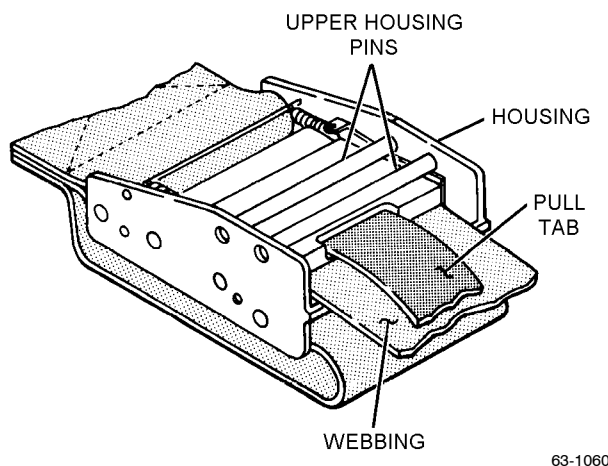
NAVAIR 13-1-6.3-2

i. Install upper slide, rubber face down. Ensure lower slide does not come out of place. Ensure slide pins sit securely in slots of guide plates.



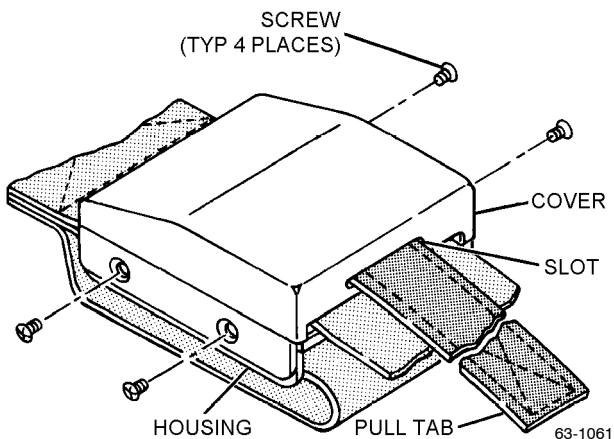
Step 2i - Para 10-58

j. Install upper housing pins. Ensure slides operate correctly; pull on pull tab to check simultaneous movement of slides. Webbing shall slide with ease through adjuster in either direction.



Step 2j - Para 10-58

k. Insert pull tab from inside out, through slot in cover. Place cover on housing and align four screw holes. Apply sealing compound to threads of four screws, and secure cover to housing.



Step 2k - Para 10-58

3. Apply sealing compound to threads of two shoulder screws, and install lapbelt release assembly removed in [step 1a](#).

4. Make necessary entries on appropriate form in accordance with OPNAVINST 4790.2 Series.

10-59. Deleted.

Pages 10-51 thru 10-56 - Deleted.

10-60. Replacement of Pressure Reducer Assembly, P/N 8720024-1. Replacement of the Pressure Reducer assembly, P/N 8720024-1 shall be accomplished only if all adjustments and troubleshooting have failed.

1. If the oxygen pressure reducer assembly fails an inspection, refer to [paragraph 10-41](#) for appropriate procedures on depleting oxygen from the emergency oxygen system and continue with the following steps then to [paragraphs 10-61 thru 10-65](#) for disassembly, adjustments and assembly. For troubleshooting, refer to [table 10-7](#).

WARNING

Do not disassemble without completely depleting the emergency oxygen system of oxygen.

2. To partially remove pressure reducer and oxygen cylinder from lid assembly, use the following steps.

WARNING

All disassembly shall be accomplished in a clean, oil free environment. Retain all oxygen parts in a clean plastic bag.

a. Remove cotter pin (2, [figure 10-26](#)) from long cam-reducer (1) and disengage actuation cable terminal balls from long cam-reducer.

b. Disengage actuation cable conduits from bracket (12, [figure 10-26](#)), by loosening the self-locking hex nuts (92 and 60, [figure 10-24](#)).

NOTE

Replacement of the conical seal washer, P/N VSF1015C3B, shall be accomplished each time the cylinder-to-cylinder tube has been disconnected.

c. Disconnect cylinder-to-cylinder tube assembly (1, [figure 10-24](#)).

d. Disconnect tube assembly (21, [figure 10-24](#)) from check valve (26, [figure 10-26](#)).

e. Remove pressure reducer attaching screws (31, [figure 10-24](#)), washers (32), and stand-offs (33).

f. Remove cushioned clamp assemblies (35 and 40, [figure 10-24](#)) and cushion clamp assemblies (40).

NOTE

If you are replacing the pressure reducer, continue with the following steps. If you are troubleshooting and adjusting the pressure reducer, refer to [table 10-7](#) and [paragraph 10-64](#).

g. Remove pressure reducer and oxygen cylinder assembly from lid assembly.

h. Cap open ends of tube assemblies.

i. Remove pressure reducer from oxygen cylinder and install dust caps on all ports.

j. Install new pressure reducer in reverse order as in the removal procedure ([paragraph 10-60](#)). Perform functional pressure check on reinstalled pressure reducer in accordance with [paragraph 10-40](#).

10-61. DISASSEMBLY OF THE EMERGENCY OXYGEN REDUCER ASSEMBLY. Disassemble only as far as required to perform adjustments. Refer to [paragraph 10-64](#) for adjustments and [table 10-7](#) for troubleshooting.

NOTE

The tamper dot on the Oxygen Hose Assembly shall be applied to the fitting in a manner which provides easy identification for inspection purposes when the seat kit is installed in the seat.

Use any contrasting color when applying tamper dots to oxygen fittings.

10-62. Disassemble using the index numbers of [figures 10-22 through 10-31](#) as a reference. Assemble in reverse order of disassembly. After nuts and fittings are properly torqued (refer to [Appendix B](#)), apply tamper dots to all oxygen fittings shown on [figures 10-22 through 10-31](#) using sealing compound (MIL-S-22473). Torque value for inlet tubing connector on oxygen hose assembly shall be 90 ± 10 lb-in. Torque value for outlet tubing connector on oxygen hose assembly shall be 125 ± 20 lb-in. Apply sealing compound (MIL-S-22473) to 50% of threads on parts indicated in Illustrated Parts Breakdown. Prior to applying sealing compound, wipe off any contaminants with cloth moistened with water.

Materials Required

Quantity	Description	Reference Number
3	Clean plastic bags	MIL-B-117 NIIN 00-334-4120
As Required	Nitrogen, Type I, Class I, Grade B	B-N-411
1	Flow Rater, 0-150 RPM Range	—
As Required	Krytox 240 AZ, Type I	MIL-G-27617 NIIN 00-007-4384
As Required	Neoprene Adhesive	MMM-A-121
As Required	Structural Adhesive	—
As Required	Tees, Tubing, Fittings	—
2	Cap Screws, 10 x 32	—
As Required	Sealing Locking, and Retaining Compound, Grade B, Type B	MIL-S-22473 NIIN 01-163-2339 (Note 1)
As Required	Sealing Locking, and Retaining Compound, Grade B	MIL-S-22473 NIIN 00-081-2339 (Note 1)

Notes: 1. Use any contrasting color.

Support Equipment Required

Quantity	Description	Reference Number
1	Locally Manufactured Oxygen Pressure Reducer Retainer Tool (refer to paragraph 10-79)	—
1	7/64 Allen Wrench	—
1	Small Pair of Tweezers	—
1	Test Gage, 0-160 PSI Range	—
1	Dia Indicator Depth Gage	D412.5
3	On-Off Valves	—
1	Water Beaker	—

NOTE

Retain all disassembled parts in a clean plastic bag (MIL-B-117). Mark each plastic bag according to each assembly disassembled.

1. Disassembly of the Flange Assembly. All index numbers refer to [figure 10-26](#), unless otherwise indicated.

a. Remove the four self-locking screws (13) that secure the bracket (12) and flange assembly (10) to the oxygen reducer housing assembly (22), using a 7/64 Allen wrench. Retain the four self-locking screws and reducers bracket.

NOTE

Set diaphragm aside separately. Do not place in plastic bag with hardware.

b. Carefully remove and retain the diaphragm (14) from the top of the oxygen reducer housing assembly.

c. Using a 1/4 inch flat tip screwdriver, insert into slot on the side of the long cam-reducer (1). Turn curved side of the long cam-reducer so it is facing down and remove cotter key (4) from the straight head pin (3). Discard cotter key.

NOTE

Removal of straight pin will cause piston and spring to fall away from bottom of flange assembly. Therefore, keep the flange assembly close to table surface.

Replace long-cam reducer if reducer assembly is leaking, with P/N 767100-1. If flange assembly is not leaking, place long cam-reducer in plastic bag, after step d.

d. Remove straight head pin (3) from the long cam-reducer. Retain straight head pin, long cam-reducer, piston and spring.

NOTE

Not all flange assemblies will contain spacers. These are necessary for leakage and pull force adjustments.

e. Remove and retain the slotted spacer (5), and all belleville(s) (6), and spacer(s) (7).

NOTE

Refer to fabrication [paragraph 10-79](#), for the manufacturing of the oxygen pressure reducer retainer tool.

f. Using the locally manufactured pressure reducer retainer tool, insert the three prongs of the retainer tool into the three holes on the top of the retainer (8). Insert 7 inch rod through hole on the side of the retainer tool to create a handle. Remove retainer and retain.

2. Disassembly of the Oxygen Reducer Housing Assembly. Refer to [figure 10-26](#) and troubleshooting

[table 10-7](#) to ensure disassembly is necessary and to what extent.

a. Remove plunger (15) from reducer housing cavity (22) and retain.

NOTE

Once the retainer has been removed keep the housing reducer assembly upright. The seat, ball bearing, retainer, and spring are free to fall out from the reducers housing.

b. Using a 3/8 inch flat tip screwdriver, remove retainer (16) from reducer housing (22) and retain.

c. Placing a cupped hand over open cavity of the reducer housing to prevent losing of seat (17), ball bearing (18), retainer (20) and helical compression spring (21). Slowly invert reducer housing and empty contents in hand and retain.

NOTE

Replace the O-ring packing, initially once, even if repeated disassembly and assembly occurs due to troubleshooting and adjustments.

Do not nick, gouge, or scratch the inside area of the oxygen reducer housing.

d. Carefully remove the O-ring packing (18) using a small pair of tweezers. Discard O-ring packing.

10-63. ASSEMBLY OF THE OXYGEN REDUCER HOUSING AND FLANGE ASSEMBLIES. Refer to [figures 10-24](#) and [10-26](#). All parts shall be cleaned in accordance with NAVAIR 13-1-6.4-1 and inspected according to [table 10-8](#). The assembly of the oxygen reducer housing and flange assemblies shall be accomplished in the reverse order of disassembly, ensuring any items which had been discarded are replaced.

10-64. ADJUSTMENTS.

10-65. ADJUSTMENTS TO THE PRESSURE REDUCER ASSEMBLY.

1. Adjustments are needed when the pull force is not between 10 to 30 pounds and/or the emergency oxygen system when actuated does not read between 45 to 80 psi indicated on test stand gage (PG-1). Refer to [paragraph 10-61](#) for disassembling of the pressure reducer assembly. Disassemble only as far as needed in order to perform adjustments.

WARNING

Ensure all emergency oxygen has been completely depleted from the oxygen system.

- a. Disassemble to the retainer (8, [figure 10-26](#)) in the flange assembly (10), ensuring the three hole retainer is visible.
- b. Using the oxygen pressure reducer retainer tool (refer to [paragraph 10-79](#)), adjust the retainer clockwise to increase pressure and counterclockwise to decrease pressure (1/4 turn is approximately 10 psi).
- c. Various thickness spacers (P/N 767902-1, -2, -3, -4, -5, -6) (7), will need to be added between the belleville washers (6) and slotted spacers (5). Add approximately one 0.010 inch spacer for every 1/4 turn that the retainer was adjusted to prevent reducer seat leakage.
- d. Reassemble reducer in reverse order. Belleville washers should be installed with their concavity opposing one another.
- e. Verify the performance of the adjusted pressure reducer and ensure the pressure reducer passes all of the functional checks.

WARNING

Before repeating steps a through f, ensure the emergency oxygen bottle has been depleted of oxygen.

- f. If pressure reducer leaks after the adjustment procedures are performed and/or the actuation pull force is not within allowable limits, repeat [steps a through e](#) several times until the leakage stops and the pull forces fall within allowable limits. If leakage cannot be stopped, after several adjustments have been made, follow procedures given in the following [step 2](#) and utilize components depicted on the alternate pressure reducer view in [figure 10-26](#).
- 2. Alternate adjustment procedure. Refer to [paragraph 10-61](#) for reducer disassembly procedures. Disassemble pressure reducer only as needed to replace

the ball bearing (19) and retainer (20) with ball bearing (19A).

- a. After removal of ball bearing (19) and retainer (20), replace both parts with ball bearing (19A) by placing it directly on top of the helical spring (21).
- b. Reassemble pressure reducer according to [paragraph 10-63](#).

NOTE

Adjustments may be required and need repeating several times in order for the pressure reducer to pass it's functional test. Refer to [paragraph 10-64](#) for adjustment procedures.

- c. Perform functional test in accordance with [paragraph 10-63](#).
- d. If the altered pressure reducer fails its functional test after repeated adjustments, remove and replace with a new pressure reducer in accordance with [paragraph 10-60](#).

10-66. ADJUSTMENT OF LOCKS AND LID LOCK RELEASE ASSEMBLIES. If the lid locks fail to release, or to release simultaneously, adjust lid lock assembly using the following procedures.

Materials Required

Quantity	Description	Reference Number
As Required	Sealing, Locking, and Retaining Compound, Grade A	MIL-S-22473 NIIN 00-081-2339 (Note 1)

Notes: 1. Use any contrasting color.

NOTE

The lower container assembly must be positioned so the rear of the container is toward the technician with the manual release handle to his right.

- 1. Adjust the right side lid lock assembly (same side as manual release assembly) as follows:
 - a. Remove attaching screws and remove cover plates from both the right and left lid lock assemblies.

NOTE

Tension springs controlling both left and right assemblies are located in the left lid lock assembly.

b. Using a 1/4-inch open-end wrench, hold cable conduit nut steady while adjusting the adjustment nut using a 5/16-inch open-end wrench. Turn adjusting nut clockwise to move housing back to tighten (increase tension) and turn nut counterclockwise to move housing forward to loosen (decrease tension) (figure 10-13).

NOTE

The conduit nut is a welded component of the conduit tubing.

c. When desired position and release timing is achieved, reinstall right lid lock assembly cover plate. Apply sealing compound (MIL-S-22473) to approximately 50% of threads of attaching screws, install and tighten.

NOTE

The cover plate is installed with the beveled edge placed to the bottom and facing the inside of the container assembly.

2. After right side lid lock assembly is adjusted, adjust left side lid lock assembly (side opposite manual release assembly) as follows:

a. Using 1/4-inch open-end wrench, hold cable conduit nut steady while adjusting the adjustment nut using a 5/16-inch open-end wrench. Turn adjusting nut counterclockwise to move housing forward to tighten (increase tension) and turn nut clockwise to move housing back to loosen (decrease tension).

NOTE

The conduit nut is a welded component of the conduit tubing.

b. When desired position and lid lock release timing has been achieved, reinstall left lid lock assembly cover plate. Apply sealing compound (MIL-S-22473) to approximately 50% of threads of attaching screws, install and tighten.

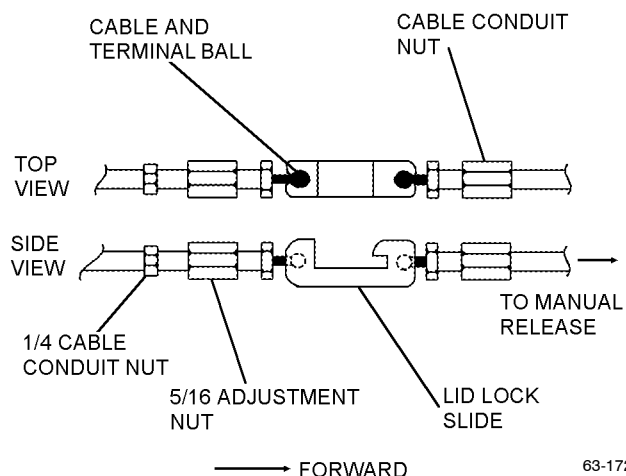
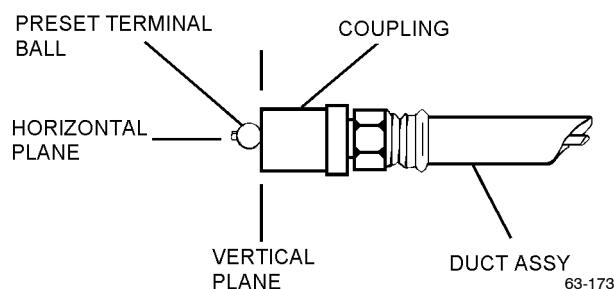


Figure 10-13. Lid Lock Assembly Adjustment

10-67. ADJUSTMENT OF AUTOMATIC EMERGENCY OXYGEN ACTUATION CABLE. Inspect and adjust the automatic emergency oxygen actuation cable as follows:

1. Inspect coupling end of cable to determine if cable terminal ball is properly positioned as preset by manufacturer.

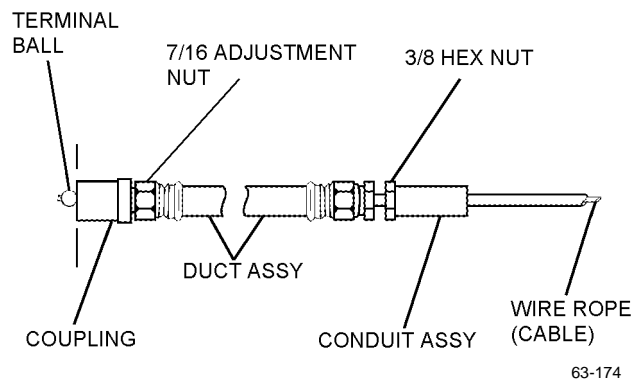


Step 1 - Para 10-67

2. If terminal ball protrudes too far out of coupling or does not protrude far enough to permit coupling with the lanyard assembly, adjustment is necessary.

3. Using 3/8-inch open-end wrench, loosen hex nut (61, figure 10-24) on conduit assembly by turning clockwise.

4. Using 7/16-inch open-end wrench, adjust duct assembly by turning adjustment nut clockwise to shorten or counterclockwise to lengthen duct assembly.



Steps 3 and 4 - Para 10-67

5. When actuation cable is properly adjusted as evidenced by position of terminal ball in relation to coupling, tighten 3/8-inch nut on conduit assembly by turning counterclockwise.

6. Make necessary entries on appropriate form in accordance with OPNAVINST 4790.2 Series.

10-68. ADJUSTMENT OF RELIEF VALVE. If the relief valve fails to unseat within the 120 to 140 psi tolerance, adjust the valve as follows:

Support Equipment Required

Quantity	Description	Reference Number
1	Relief Valve Adjustment Tool	Fabricate IAW paragraph 10-76
<p>1. Bleed oxygen pressure to zero and remove relief valve.</p> <p>2. Adjust the valve unseating pressure by turning the pressure nut clockwise to increase relief valve pressure or counterclockwise to decrease pressure (figure 10-14).</p>		

NOTE

Turn in incremental adjustments of 1/2 (± 1/4) turns.

3. Reinstall oxygen relief valve.
4. Perform functional check in accordance with [paragraph 10-40](#).

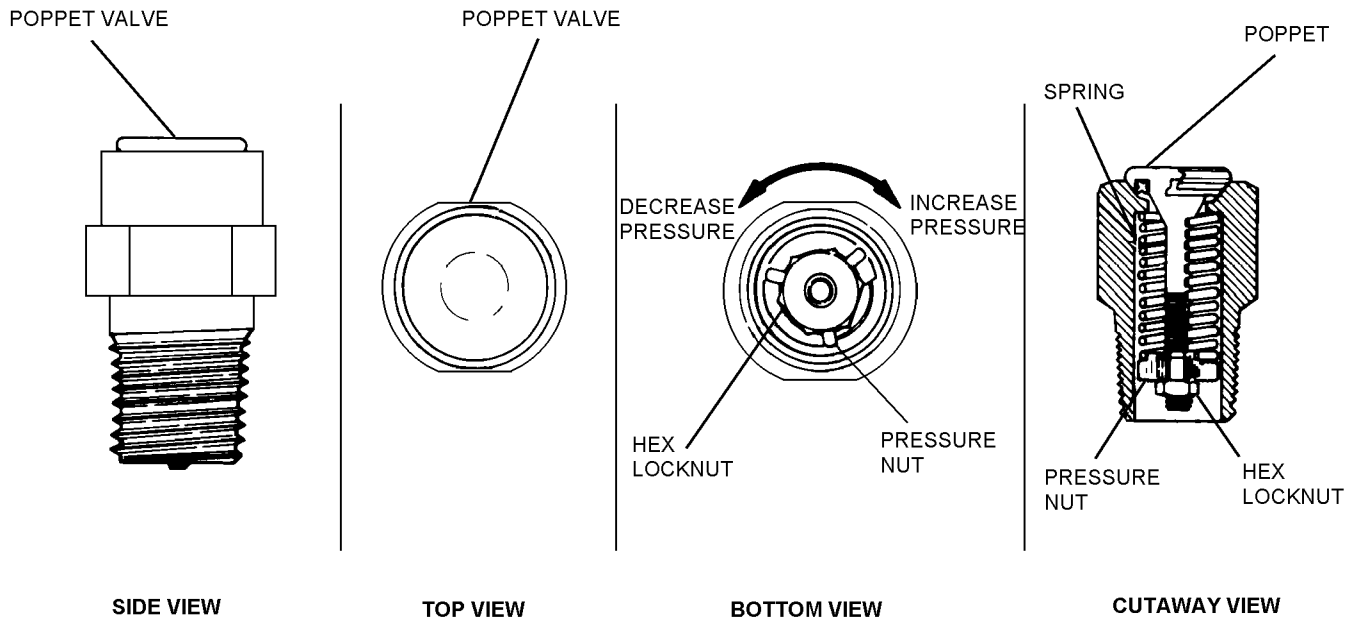


Figure 10-14. Adjustable Relief Valve

Section 10-7. Fabrication

10-69. GENERAL.

10-70. This section contains instructions for fabrication of tools and components that can be manufactured by local maintenance activities.

10-71. DROPLINE. To fabricate a dropline, proceed as follows:

1. Lay out webbing and position identification yarn on top before proceeding.

2. Construct a dropline in accordance with [figure 10-15](#).

3. Sear exposed ends of webbing.

4. All stitching shall be ASTM-D-6193, Type 301, 8 to 10 stitches per inch, and backstitch 1/2 inch minimum.

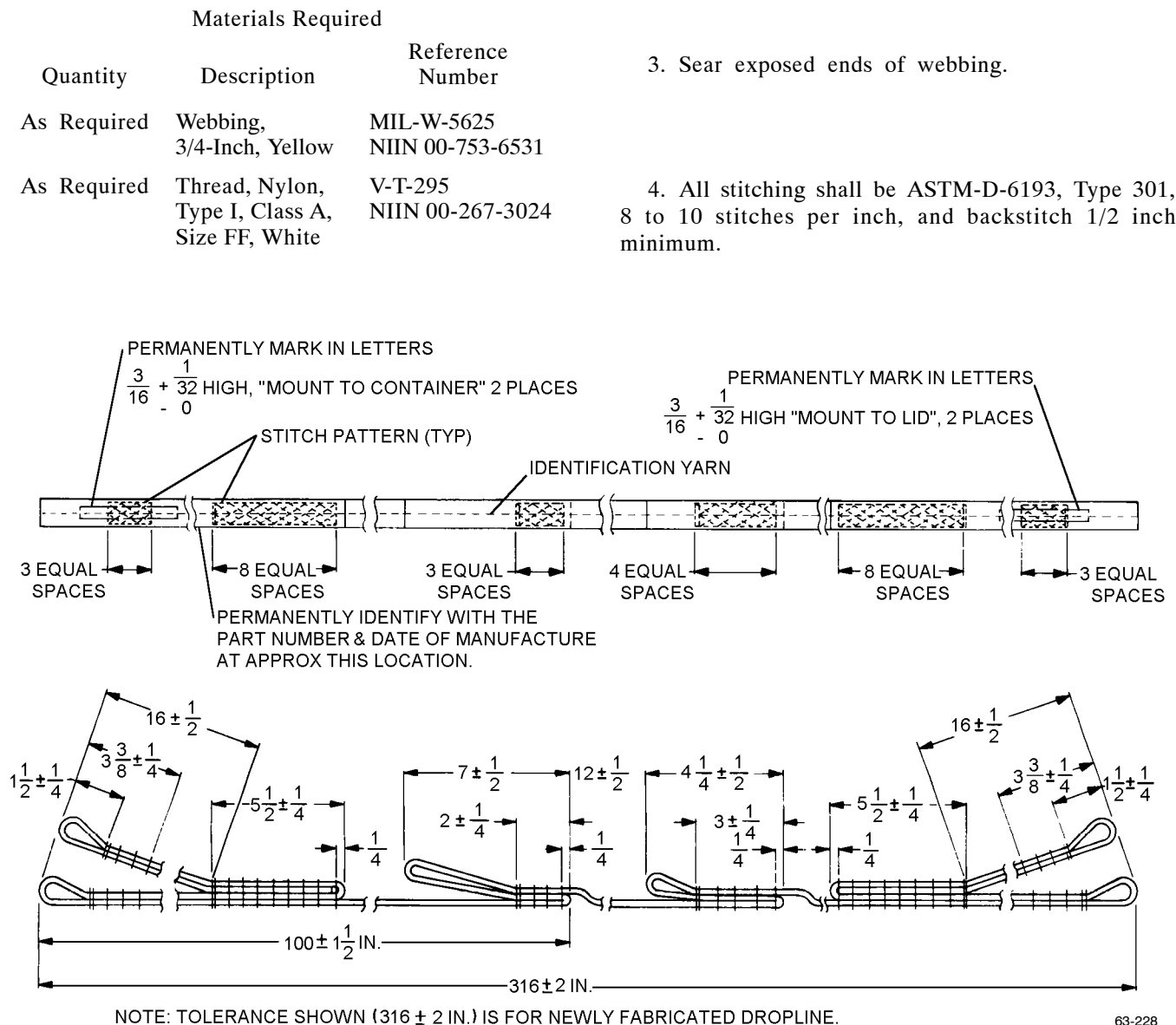


Figure 10-15. Dropline

10-72. T-WRENCH. Fabricate T-wrench from steel stock in accordance with figure 10-16.

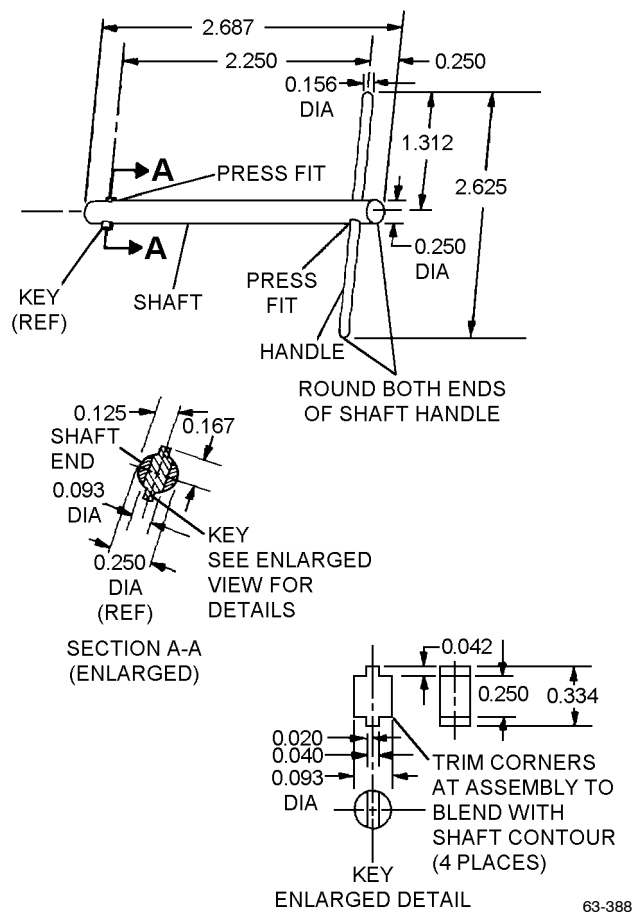


Figure 10-16. T-Wrench Fabrication

10-73. BOOT. To fabricate a boot, proceed as follows:

Materials Required

Quantity	Description	Reference Number
As Required	Nylon	MIL-C-8135 or MIL-C-81395
As Required	Thread, Nylon, Type I, Class A, Size FF, White	V-T-295 NIIN 00-267-3024 (or equivalent)

1. Construct a boot in accordance with figure 10-17.

2. Sear exposed ends of edges.

3. All stitching shall be ASTM-D-6193, Type 301, 8 to 10 stitches per inch, and backstitch 1/2 inch minimum

10-74. LIFERAFT PACKING AID. To fabricate a liferaft packing aid, proceed as follows:

1. Fabricate packing aid as shown in figure 10-18.

10-75. CONTAINER ASSEMBLY PAD. To fabricate a container assembly pad, P/N 221D460-11, proceed as follows:

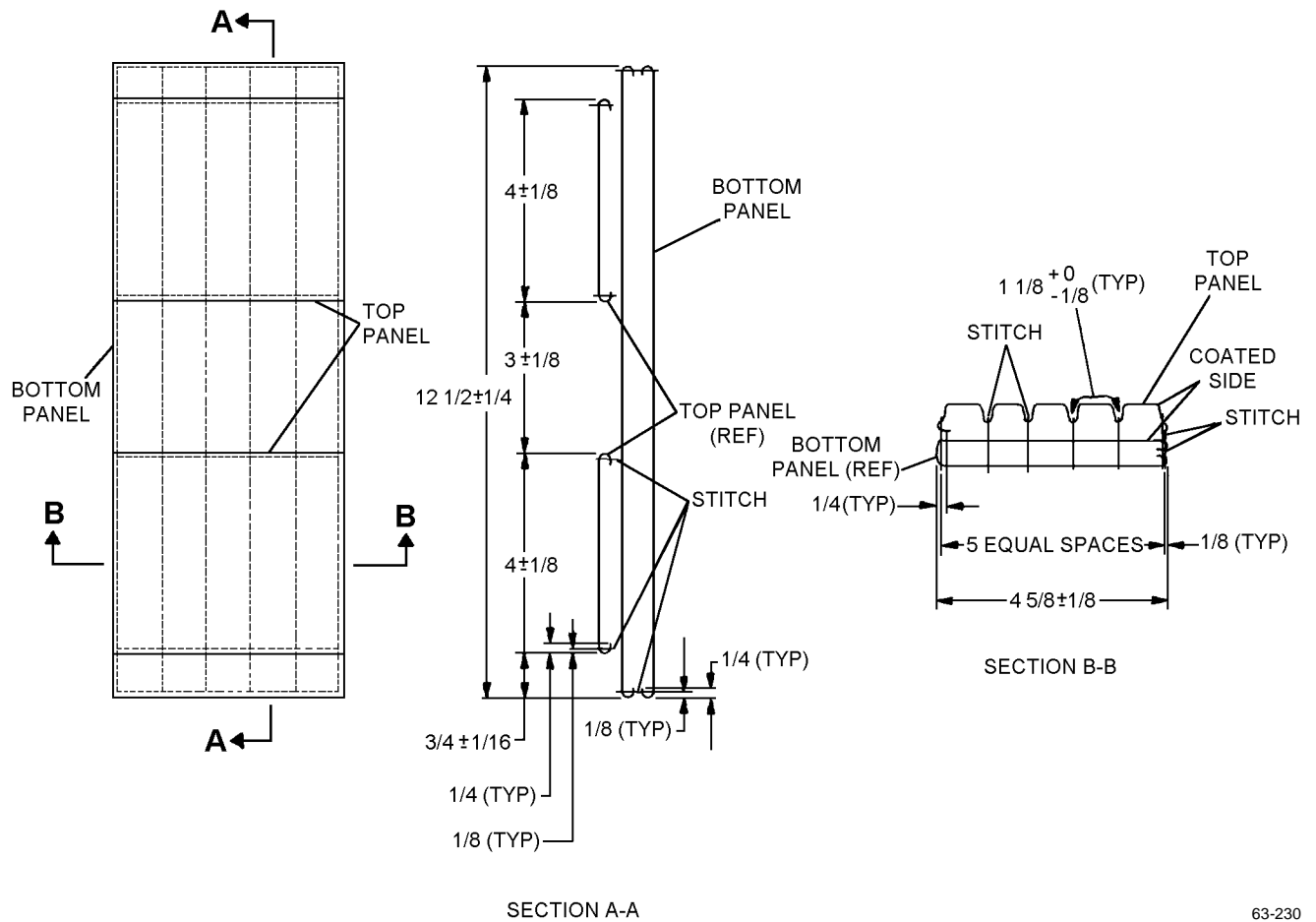
Materials Required

Quantity	Description	Reference Number
1	Cork Sheet, 0.062-Inch Thick	MIL-T-6841 NIIN 00-551-8332

1. Fabricate a container assembly pad in accordance with figure 10-19.

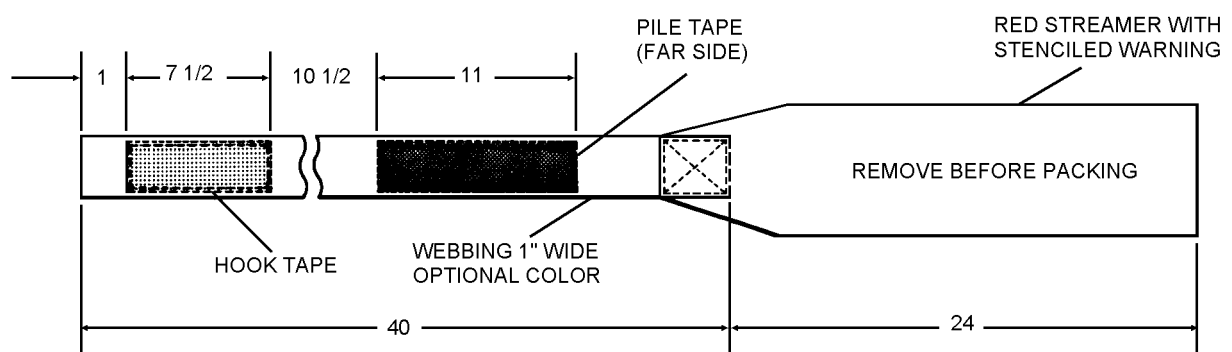
2. Rubber stamp part number on container assembly pad.

10-76. RELIEF VALVE ADJUSTMENT TOOL. Fabricate relief valve pressure nut three-prong adjustment tool in accordance with figure 10-20.



63-230

Figure 10-17. Boot

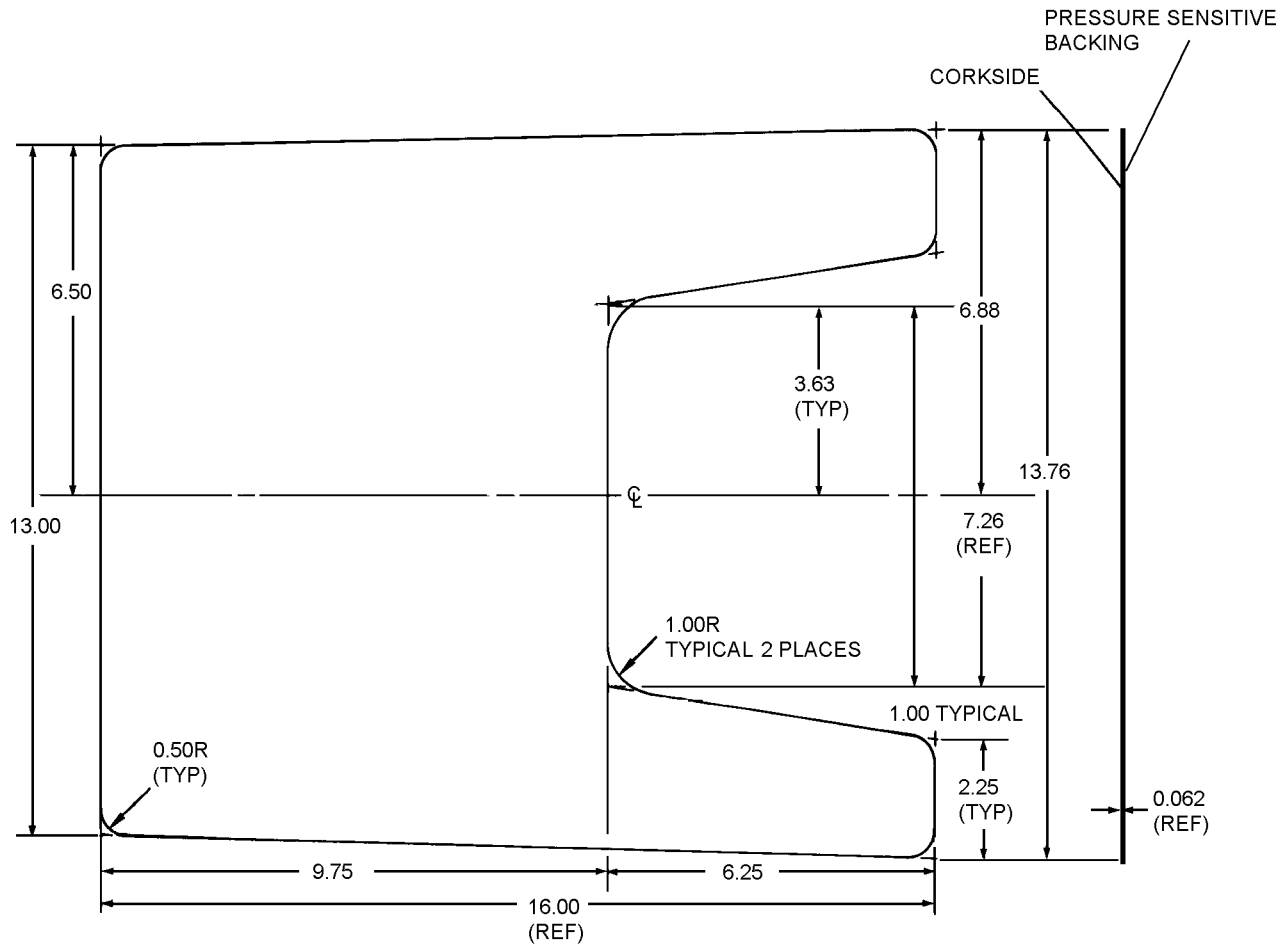


NOTES:

1. PILE TAPE AND HOOK TAPE ARE ON OPPOSITE SIDES OF WEBBING.
2. STREAMER WITH STENCILED WARNING MUST BE MADE WITH RED MATERIAL.

63-534

Figure 10-18. Liferaft Packing Aid



NOTES:
TOLERANCES ARE:
X.XX = ± 0.01
X.XXX = ± 0.005

63-3051

Figure 10-19. Container Assembly Pad

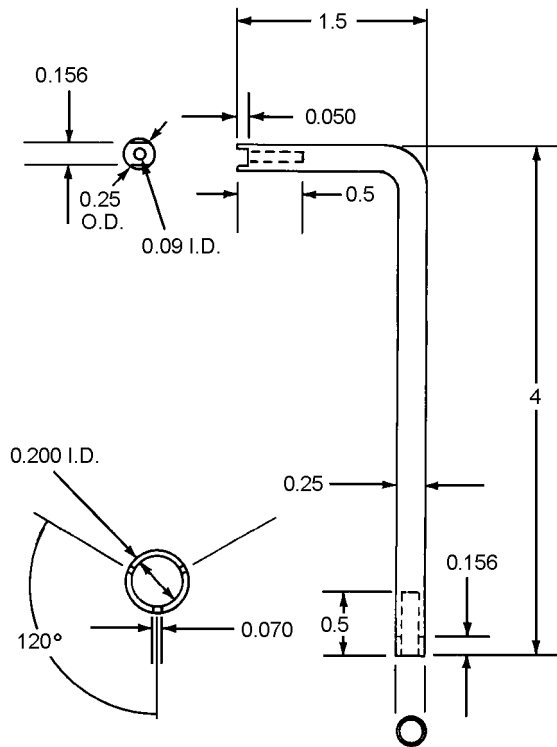
Materials Required			Materials Required		
Quantity	Description	Reference Number	Quantity	Description	Reference Number
As Required	Mild Steel or Brass Drill Rod, 0.25 Dia.	—	As Required	0.06 Dia. Plastic Coated Cable	GL10B (CAGE 26512)
			1	Snaphook	MIL-S-43770-12A-MIZEI
			2	Sleeve, Swaging	GS10C2 (CAGE 26512)

10-77. (F-14) ACTUATION LANYARD (AN/URT-33 RADIO BEACON). Fabricate actuation lanyard P/N A51D60016-5 as follows:

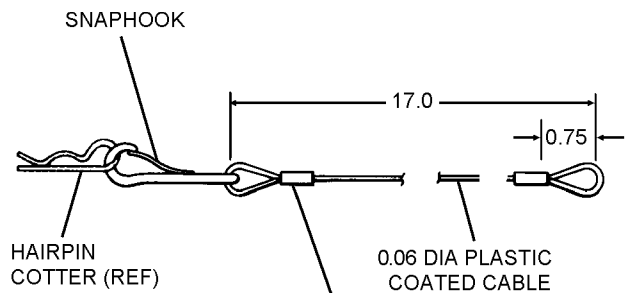
1. Cut required length of plastic coated cable and assemble lanyard as indicated.

NOTE

When measuring cable length be sure to allow for end loops and swaging requirement.



THREE PRONG PRESSURE NUT ADJUSTABLE TYPE

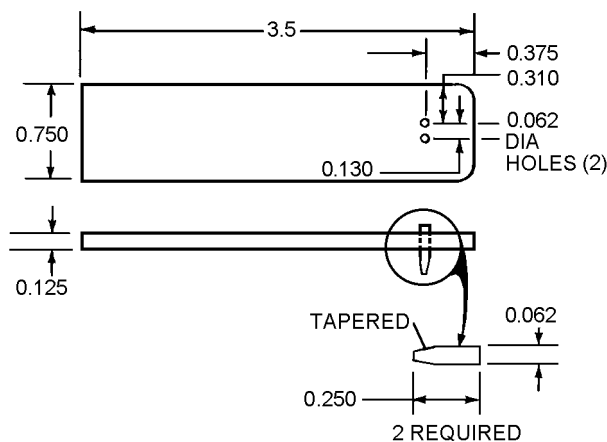


SLEEVE SWAGING (TYP)

63-977

Step 1 - Para 10-77

10-78. (EA-6B AIRCRAFT) ACTUATION LANYARD (AN/URT-33 RADION BEACON). Fabricate actuation lanyard P/N 128ES10230-3 as follows:



CAP ADJUSTABLE TYPE

63-3053

Materials Required

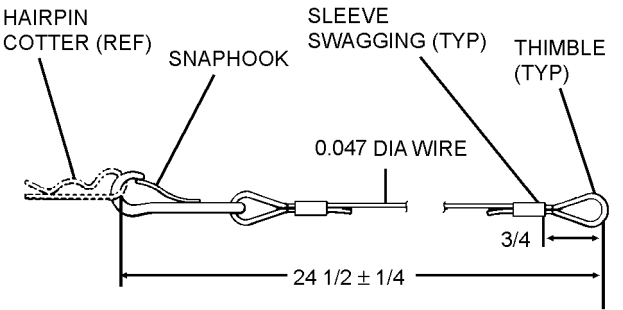
Quantity	Description	Reference Number
As Required	0.047 Dia. Wire (with Teflon coating O.D. is 0.062)	GL10B2-27 (CAGE 26512)
2	Sleeve, Swaging	GS10C2 (CAGE 26512)
1	Snaphook	MIL-S-43770-12A-MIZEI
2	Thimble, Wire Cable, CRS	AN10C-3

Figure 10-20. Relief Valve Adjustment

1. Cut required length of cable and assemble as indicated.

NOTE

When measuring cable length be sure to allow for end loops and swaging requirements.



NOTE: WIRE BREAKING STRENGTH 270 lbs. 63-548

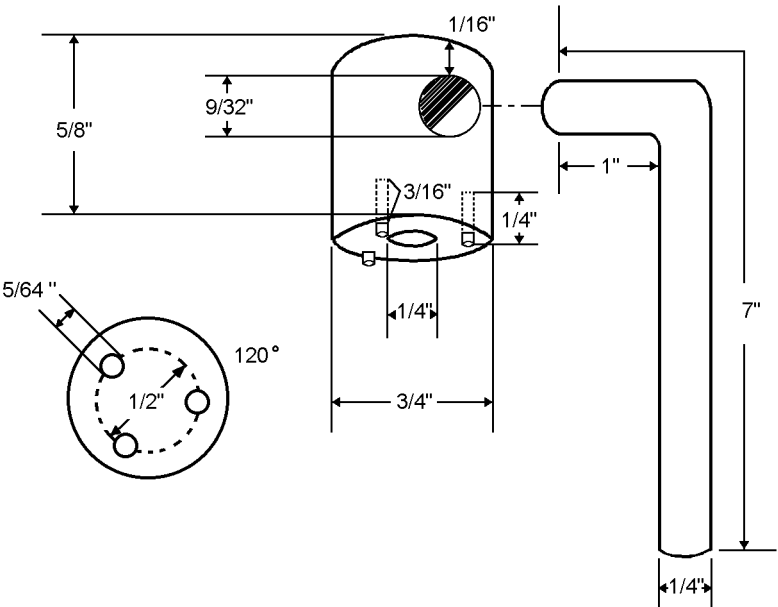
Step 1 - Para 10-78

10-79. OXYGEN PRESSURE REDUCER RETAINER TOOL. Fabricate oxygen pressure reducer retainer tool as follows. Refer to Figure 10-21:

Materials Required

Quantity	Description	Reference Number
1	3/4" Diameter Stainless Steel Rod 5/8" long	—
3	5/64" Diameter Stainless Steel Rod or Equivalent 1/4" long	—
1	1/4" Diameter Stainless Steel Rod 7" long	—

- 1. Drill a 1/4" hole centered thru the length of the 3/4" diameter steel rod.
- 2. Drill a 9/32" hole thru the 3/4" diameter rod approximately 1/16" from one end of the rod.
- 3. Drill three holes equally spaced (120 degrees apart) on a 1/2 inch diameter circle centered on the opposite end of the 3/4 inch diameter rod. Each hole is 5/64" in diameter and 3/16" deep.
- 4. Press fit one of the 5/64" diameter rods into each of the 5/64" holes drilled in the end of the 3/4" rod. Approximately 1/16" shall protrude when finished.
- 5. Bend the 1/4" diameter rod into a 90 degree angle approximately 1 inch from one end to form a handle.



63-12

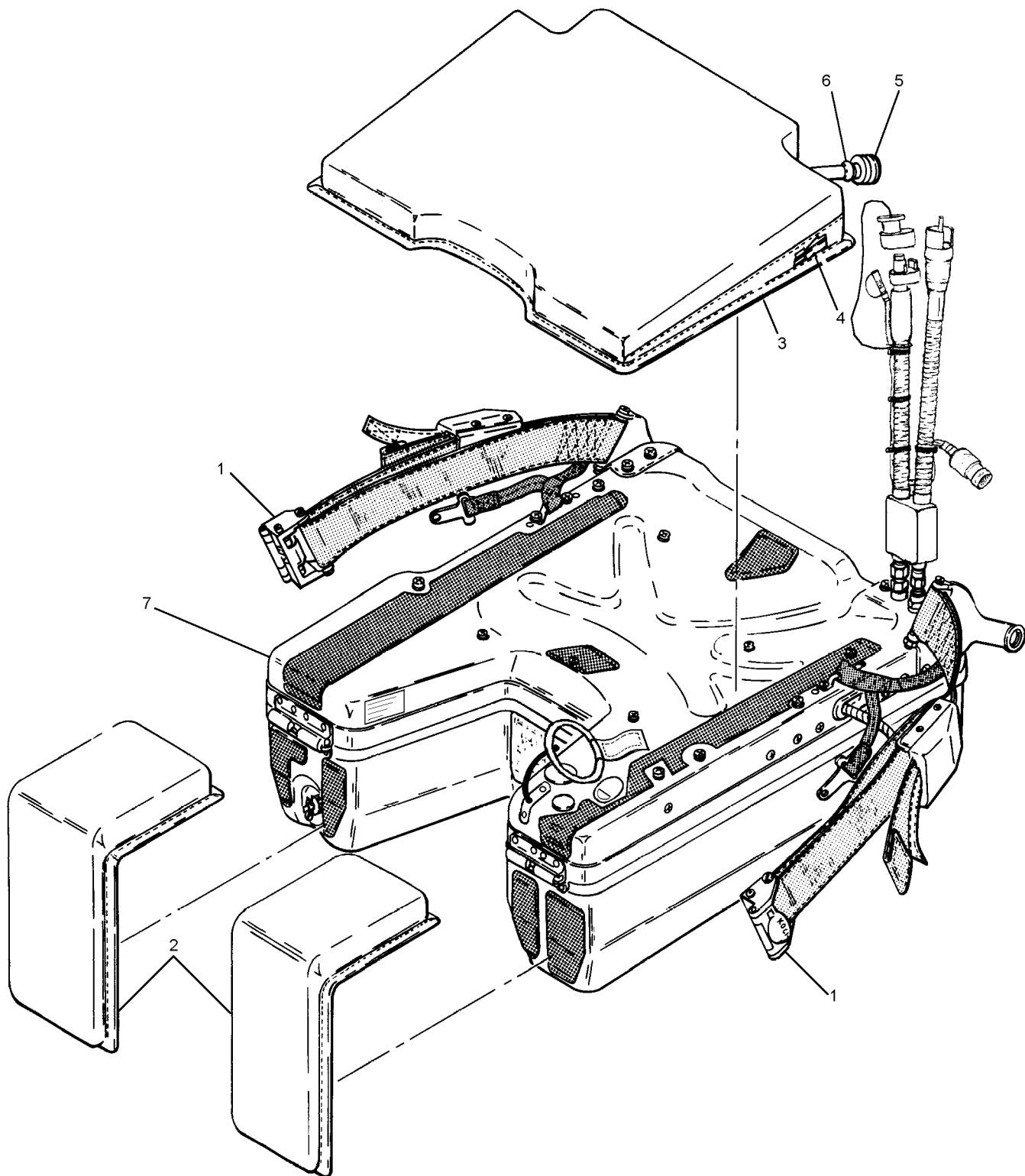
Figure 10-21. Oxygen Pressure Reducer Retainer Tool

Section 10-8. Illustrated Parts Breakdown

10-80. GENERAL.

10-81. This section lists and illustrates the assemblies and detail parts of the SKU-12/A survival kit assembly as manufactured and supplied by American Safety Flight Systems, Inc. (CAGE 31441) P/N 8510004.

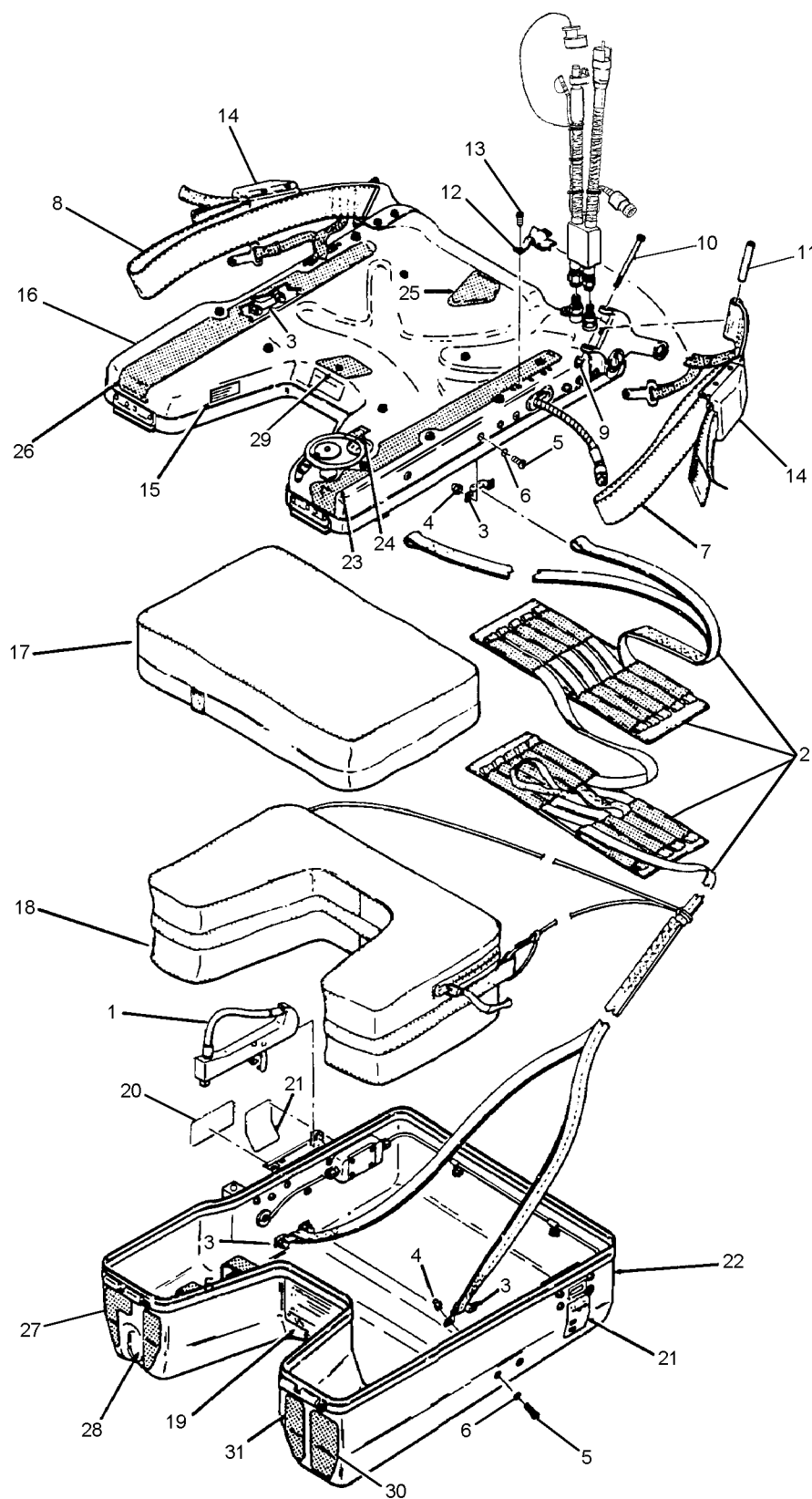
10-82. The Illustrated Parts Breakdown should be used during maintenance when requisitioning and identifying parts.



63-104

Figure 10-22. SKU-12/A Seat Survival Kit Assembly

Figure and Index Number	Part Number	Description	Units Per Assembly	Usable On Code
		1 2 3 4 5 6 7		
10-22	3246AS100	SEAT SURVIVAL KIT ASSEMBLY, SKU-12/A	1	
-1	015-11365-1	. RELEASE ASSEMBLY, Lapbelt (Note 1)	2	
-2	128ES10070-5	. CUSHION, Thigh support	2	
	128ES10070-1	. CUSHION, Thigh support (Alternate for 128ES10070-5)	2	
	128ES100607	. CUSHION ASSEMBLY, Comfort	1	
	128ES100601	. CUSHION ASSEMBLY, Comfort (Alternate for 128ES10060-7)	1	
-3	128ES100609	. . COVER ASSEMBLY, Cushion	1	
	128ES1006025	. . CUSHION ASSEMBLY	1	
-4	128ES1006027	. . . BLADDER ASSEMBLY	1	
-5	128SCES115-13	. . COUPLING	1	
-6	NAS397-10	. . CLAMP, Ratchet, one piece	1	
-7	85100041	. SURVIVAL KIT ASSEMBLY, SKU-12/A (See figure 10-23 for BKDN)	1	
	Notes: 1. When replacing lapbelt assembly, apply MIL-S-22473 to shoulder screws. Use any contrasting color.			



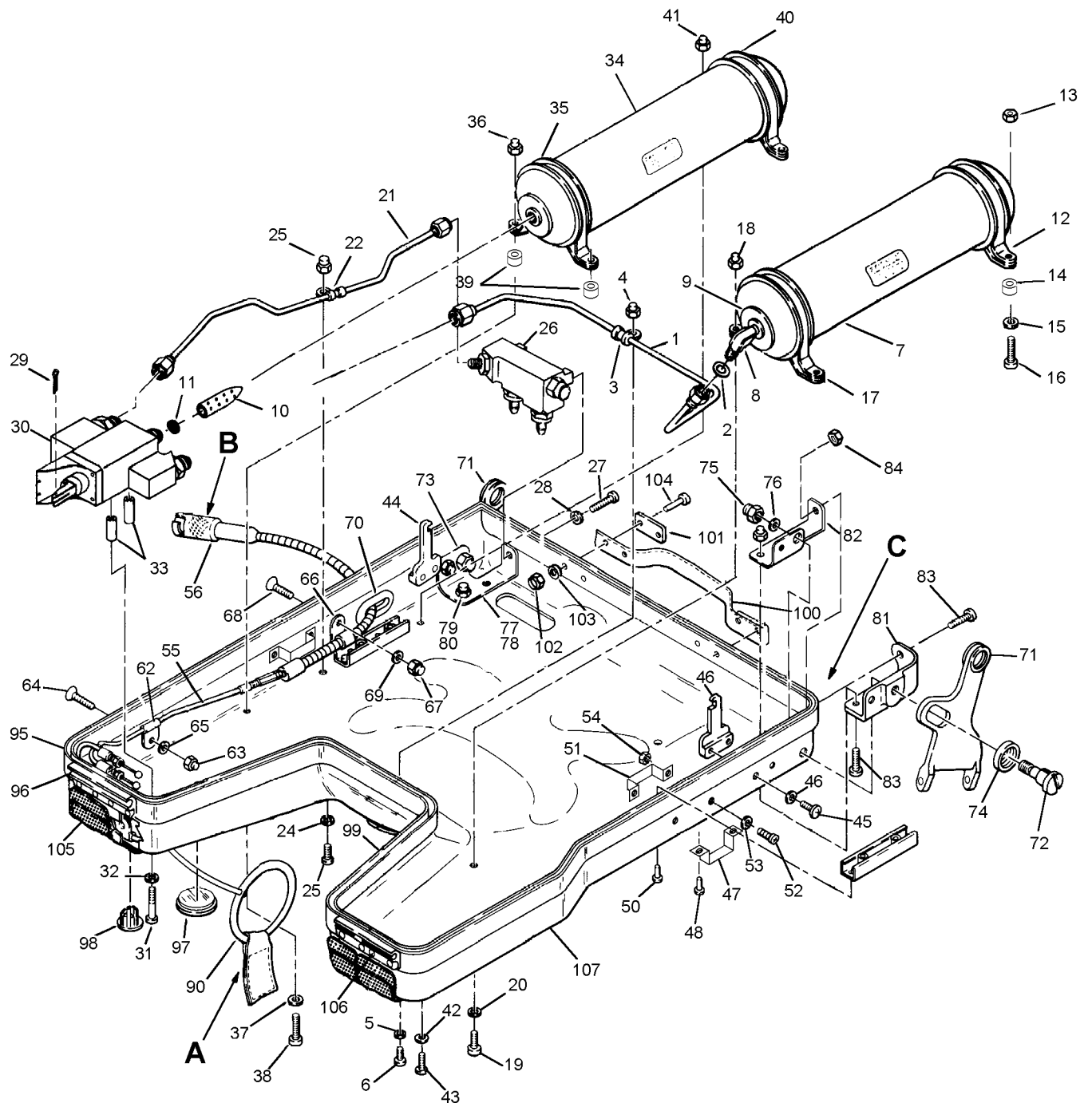
63-105

Figure 10-23. SKU-12/A Seat Survival Kit Assembly Components

Figure and Index Number	Part Number	Description 1 2 3 4 5 6 7	Units Per Assembly	Usable On Code
10-23	8510004-1	SURVIVAL KIT ASSEMBLY	REF	
		(See figure 10-22 for NHA)		
-1	365750	. HANDLE ASSEMBLY, Release	1	
		(See figure 10-31 for BKDN)		
-2	8410005-1	. DROPLINE AND BOOT ASSEMBLY	1	
-3	365700-1	. BRACKET, Footman	4	
		(ATTACHING PARTS)		
-4	22K2-62	. NUT, Hex, cap	2	
-5	MS51957-28	. SCREW	2	
-6	AN960C6L	. WASHER	2	
		---*---		
	8610050-2	. HARNESS ASSEMBLY, Restraint, RH	1	
	8610050-1	. HARNESS ASSEMBLY, Restraint, LH	1	
-7	8610050-21	. HARNESS ASSEMBLY, LH	1	
-8	8610050-22	. HARNESS ASSEMBLY, RH	1	
		(ATTACHING PARTS FOR ITEMS 7 AND 8)		
-9	22K1-02	. NUT, Cap	1	
-10	8610054-1	. PIN SCREW, Harness	1	
-11	8610052-1	. SLEEVE, Bolt	1	
		---*---		
-12	7110012-1	. BRACKET, Footman	2	
		(ATTACHING PARTS)		
-13	MS51958-62	. SCREW	2	
		---*---		
-14	8410059-1	. ADJUSTER, Harness belt	1	
	GA506D1	. ADJUSTER, Harness belt	1	
		(Interchangeable with 8410059-1 in pairs only)		
-15	6999002-9	. PLATE, Identification, lid	1	
-16	8610023-1	. LID ASSEMBLY	1	
		(See figure 10-24 for BKDN)		
-17	3171AS100-1	. COVER, Liferaft, survival kit	1	
-18	8810020-1	. CONTAINER, Equipment	1	
-19	6999002-25	. PLATE, Identification, SKU-12/A	1	
-20	102D499-17	. LABEL, Warning	1	
-21	99133	. DECAL COVER, Manual release slot	1	
-22	8610003-1	. CONTAINER ASSEMBLY	1	
		(See figure 10-27 for BKDN)		
-23	8610022-21	. FASTENER STRIP (LH) (16.72 X 2 IN.)	1	
-24	8610022-23	. FASTENER STRIP (MANUAL RELEASE)	1	
		(1.50 X 1 IN.)		
-25	8610022-25	. FASTENER STRIP (AFT CENTER)	1	
		(3.12 X 2 IN.)		
-26	8610022-27	. FASTENER STRIP (RH) (16.72 X 2 IN.)	1	

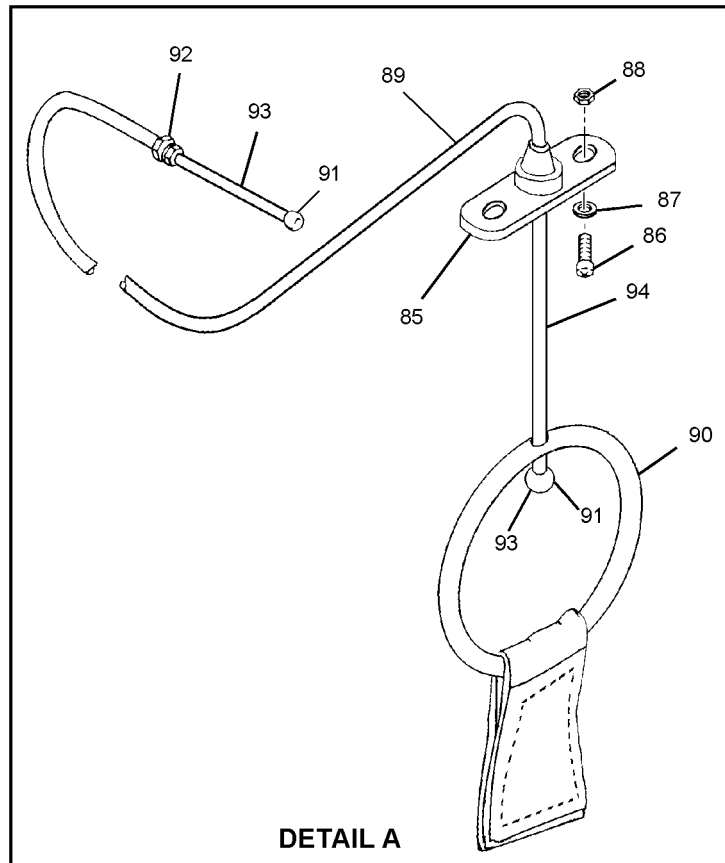
NAVAIR 13-1-6.3-2

Figure and Index Number	Part Number	Description							Units Per Assembly	Usable On Code
		1	2	3	4	5	6	7		
10-23-27	8610002-27	.							1	
-28	8610002-25	.							1	
-29	8610022-29	.							1	
-30	8610002-21	.							1	
-31	8610002-23	.							1	

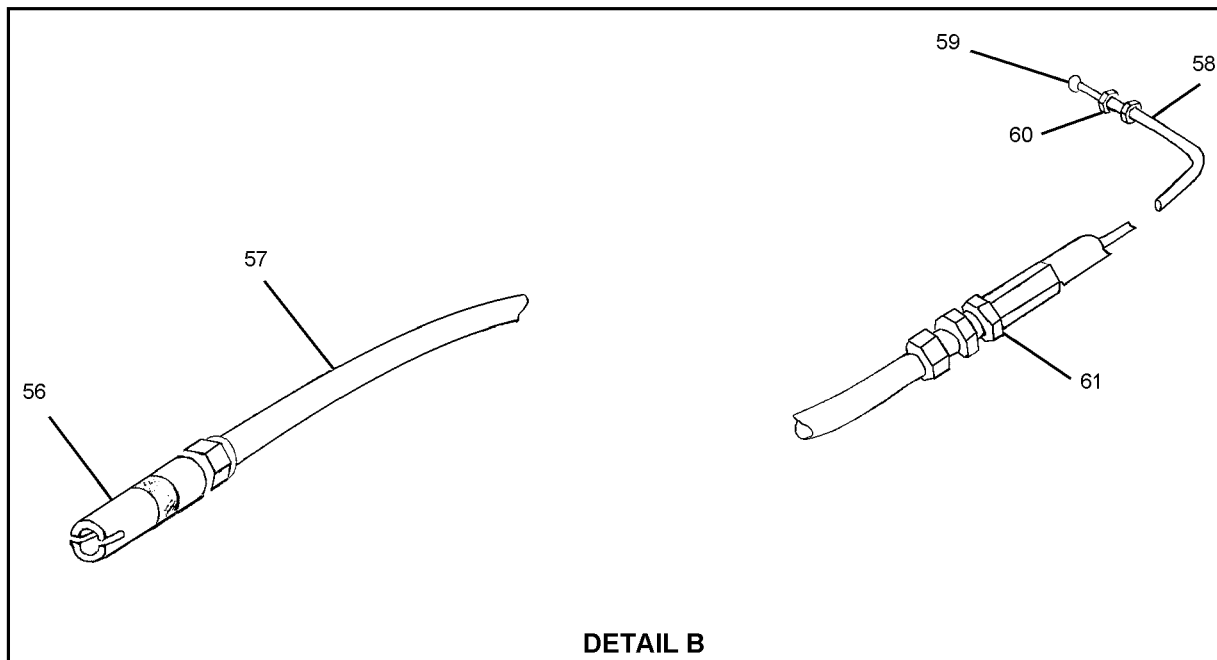


63-106

Figure 10-24. Lid Assembly (Sheet 1 of 3)

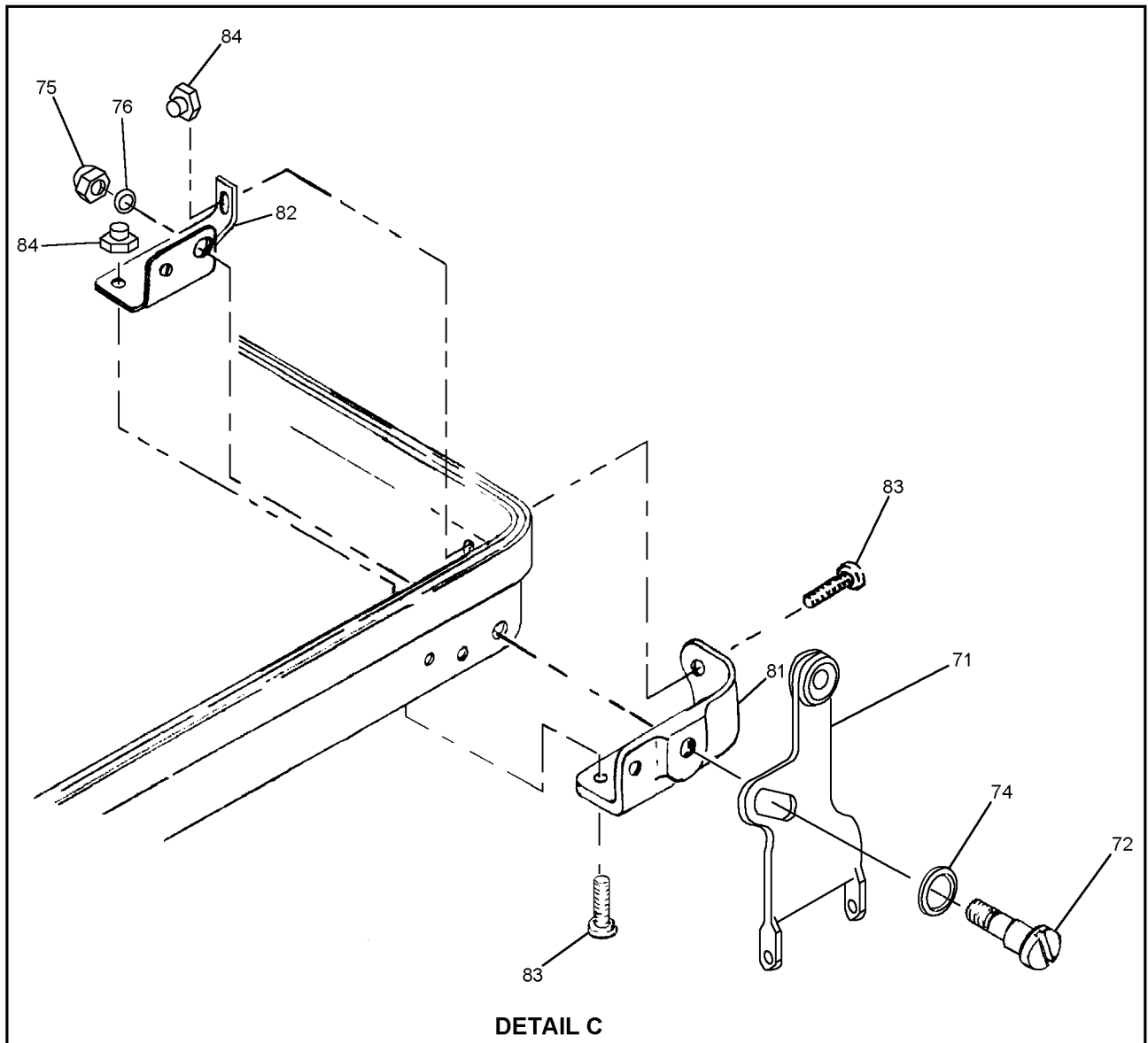


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Figure 10-24. Lid Assembly (Sheet 2 of 3)



63-109

Figure 10-24. Lid Assembly (Sheet 3 of 3)

NAVAIR 13-1-6.3-2

Figure and Index Number	Part Number	Description 1 2 3 4 5 6 7	Units Per Assembly	Usable On Code
10-24	8610023-1	LID ASSEMBLY, Survival Kit, SKU-12/A (See figure 10-23 for NHA) (Note 10)	REF	
-1	8610033-1	. TUBE ASSEMBLY, Cylinder connect (Notes 4 and 7)	1	
-2	VSF1015C3B	. WASHER, Conical seal	2	
-3	MS25281-3	. CLAMP, Plastic, loop (ATTACHING PARTS)	1	
-4	MS51958-63	. SCREW	1	
-5	AN960C10L	. WASHER	1	
-6	22K2-02	. NUT ---*---	1	
	8820059-1	. CYLINDER ASSEMBLY, Oxygen (Note 7)	1	
-7	8620028-1	. . CYLINDER, Oxygen, nonshatterable	1	
-8	MS20822-3J	. . ELBOW (Note 2)	1	
-9	8610061-1	. . FITTING, Pipe reducer (Note 2)	1	
-10	7620072-1	. . TUBE, Antisiphon (Note 2)	2	
-11	F-4173-1-20	. . FILTER ELEMENT	2	
-12	NAS1716C40T	. CLAMP ASSEMBLY, Cushioned, (aft) (ATTACHING PARTS)	1	
-13	22K2-02	. NUT, Self-locking, cap	2	
-14	8810022-1	. SPACER, No. 10 ---*---	2	
-15	MS51958-65	. SCREW	2	
-16	AN960C10L	. WASHER	2	
-17	NAS1716C40T	. CLAMP ASSEMBLY, Cushioned, (fwd) (ATTACHING PARTS)	1	
-18	22K2-02	. NUT, Self-locking, cap	2	
-19	MS51958-62	. SCREW ---*---	2	
-20	AN960C10L	. WASHER	2	
-21	8610035-1	. TUBE ASSEMBLY, Oxygen outlet (Notes 5 and 6)	1	
-22	MS25281-4	. CLAMP, Loop, plastic (ATTACHING PARTS)	1	
-23	MS51958-63	. SCREW ---*---	1	
-24	AN960C10L	. WASHER	1	
-25	22K2-02	. NUT, Self-locking, cap	1	
-26	8810023-1	. MANIFOLD ASSEMBLY, Oxygen outlet (See figure 10-25 for BKDN) (Note 6) (ATTACHING PARTS)	1	
-27	MS51958-63	. SCREW (Note 1)	2	
-28	AN960C10L	. WASHER ---*---	2	

Figure and Index Number	Part Number	Description							Units Per Assembly	Usable On Code
		1	2	3	4	5	6	7		
10-24-29	MS24665-153	.	PIN, Cotter						1	
	8820058-1	.	REDUCER AND CYLINDER ASSEMBLY						1	
			(See figure 10-24 for NHA)							
-30	8720024-1	.	REDUCER ASSEMBLY, Pressure						1	
			(See figure 10-26 for BKDN) (Note 1)							
			(ATTACHING PARTS)							
-31	MS51957-69	.	SCREW (Note 1)						2	
-32	AN960C10L	.	WASHER						2	
-33	NAS43DD3-60	.	SPACER (Standoff)						2	
			---*---							
-34	8620028-1	.	CYLINDER, Oxygen, nonshatterable						1	
			(Note 7)							
-35	NAS1761C40T	.	CLAMP ASSEMBLY, Cushion, (fwd)						1	
			(ATTACHING PARTS)							
-36	22K2-02	.	NUT, Self-locking, cap						2	
-37	AN960C10L	.	WASHER						2	
-38	MS51958-65	.	SCREW						2	
			(ATTACHING PARTS)							
-39	8810022-1	.	SPACER, No. 10						2	
			---*---							
-40	NAS1716C40T	.	CLAMP ASSEMBLY, Cushioned, (aft)						1	
			(ATTACHING PARTS)							
-41	22K2-02	.	NUT, Self-locking, cap						2	
-42	AN960C10L	.	WASHER						2	
-43	MS51958-62	.	SCREW						2	
			---*---							
-44	8410030-1	.	LATCH, Lid						2	
			(ATTACHING PARTS)							
-45	MS51958-63	.	SCREW (Note 1)						2	
-46	AN960C10L	.	WASHER						2	
			---*---							
-47	7110012-1	.	BRACKET, Footman, (top)						2	
			(ATTACHING PARTS)							
-48	MS51958-62	.	SCREW						2	
			---*---							
-49	8810025-1	.	NUT CHANNEL, Gang						2	
			(ATTACHING PARTS)							
-50	MS20426AD3-4	.	RIVET, Solid head						2	
			---*---							
-51	365700-1	.	BRACKET, Footman (inside)						2	
			(ATTACHING PARTS)							
-52	MS51957-28	.	SCREW						2	
			---*---							
-53	AN960C6L	.	WASHER						2	

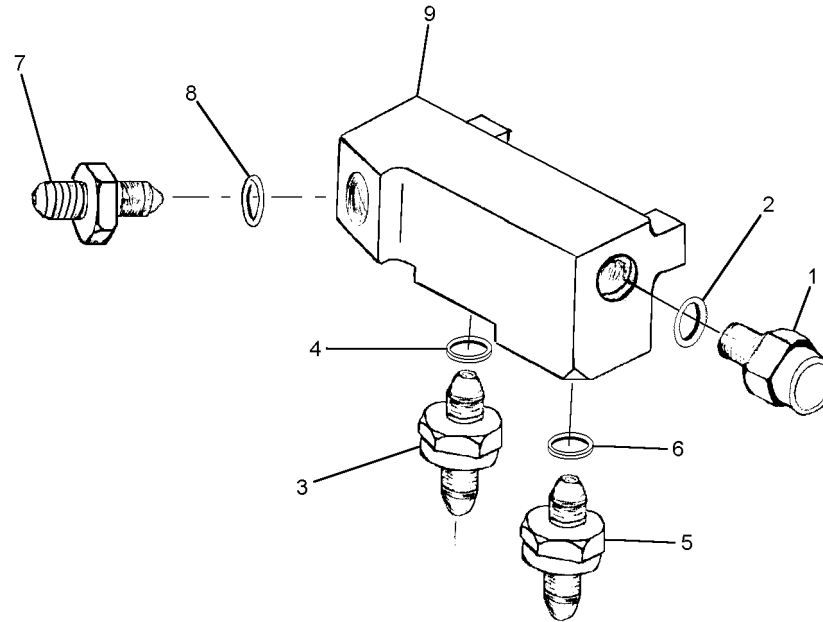
NAVAIR 13-1-6.3-2

Figure and Index Number	Part Number	Description 1 2 3 4 5 6 7	Units Per Assembly	Usable On Code
10-24-54	22K2-62	. NUT, Self-locking, cap	2	
-55	8610045-3	. LANYARD ASSEMBLY, Oxygen, auto-actuation (kit to aircraft) (Notes 3 and 8)	1	
-56	8610044-1	. . COUPLING ASSEMBLY	1	
-57	8610010-3	. . DUCT ASSEMBLY	1	
-58	8610046-1	. . CONDUIT ASSEMBLY	1	
-59	RA-2487-2	. . BALL, Terminal (Note 8)	1	
-60	MS21043-3	. . NUT, Hex, self-lock	1	
-61	MS35650-304	. . NUT, Hex, plain	1	
-62	MS25281-5	. CLAMP, Loop (ATTACHING PARTS)	1	
-63	22K2-02	. NUT	1	
-64	MS51958-63	. SCREW	1	
-65	AN960C10L	. WASHER ---*---	1	
-66	MS25281-2	. CLAMP, Loop (ATTACHING PARTS)	1	
-67	22K2-02	. NUT	1	
-68	MS51958-63	. SCREW	1	
-69	AN960C10L	. WASHER ---*---	1	
-70	MS35489-42	. GROMMET	1	
-71	8610032-1	. FITTING, Anchor (ATTACHING PARTS)	2	
-72	8610031-3	. LUG PIN, Harness, RH	1	
-73	8610031-1	. LUG PIN, Harness, LH	1	
-74	8610051-1	. BONNET, Lug pin	1	
-75	22K2-048	. NUT, Self-locking, cap	1	
-76	8610009-1	. WASHER ---*---	1	
-77	8610025-1	. BRACKET, Harness, LH	1	
-78	8610028-1	. PLATE, Backup, LH (ATTACHING PARTS FOR ITEMS 77 AND 78)	1	
-79	MS51958-61	. SCREW	4	
-80	22K2-02	. NUT, Self-locking, cap	4	
-81	8610026-1	. BRACKET, Harness, RH	1	
-82	8610028-1	. PLATE, Backup, RH (ATTACHING PARTS FOR ITEMS 81 AND 82)	1	
-83	MS51958-61	. SCREW	4	
-84	22K2-02	. NUT, Self-locking, cap	4	
	8610038-1	. LANYARD ASSEMBLY, Manual release, oxygen (Notes 3 and 8)	1	

Figure and Index Number	Part Number	Description 1 2 3 4 5 6 7	Units Per Assembly	Usable On Code
10-24-85	8610042-1	. . CABLE GUIDE (ATTACHING PARTS)	1	
-86	MS51957-28	. . SCREW	2	
-87	AN960C6L	. . WASHER	2	
-88	22K2-62	. . NUT, Self-locking ---*---	2	
-89	8610040-1	. . CONDUIT ASSEMBLY	1	
-90	8610061-1	. . PULL RING ASSEMBLY	1	
-91	RA-2487-2	. . BALL, Terminal (Note 8)	2	
-92	MS21043-3	. . NUT, Self-locking, hex	1	
-93	MIL-W-83420	. . WIRE ROPE (0.062 DIA, CRES)	A/R	
-94	AMS3655	. . TUBING, Electrical insulation (Size 13, Teflon)	A/R	
-95	8610055-1	. HINGE ASSEMBLY, Female (ATTACHING PARTS)	2	
-96	MS20470AD4-7.5	. RIVET ---*---	4	
-97	8610012-1	. WINDOW, Oxygen gage (Note 12)	1	
-98	SS48152-K1611	. PLUG, Hole	1	
-99	6999002-9	. PLATE, Identification	1	
-100	8610008-1	. STRAP, Carrying	1	
-101	8610063-1	. PLATE, Backing (ATTACHING PARTS FOR ITEMS 100 AND 101)	2	
-102	22K2-62	. NUT, Self locking, cap	4	
-103	AN960C6L	. WASHER	4	
-104	MS51957-31	. SCREW ---*---	4	
-105	8610022-21	. FASTENER TAPE, Pile (Note 11)	A/R	
-106	8610022-27	. FASTENER TAPE, Pile	A/R	
-107	8610021-1	. LID, Survival kit, riveted and bonded	1	
Notes: 1. Apply sealant MIL-S-22473 to male threads before installing. Use any contrasting color. 2. Apply sealing tape to threads prior to installing 3. Check for 20 lb pull force with cylinder full and 0-90 psig applied to system outlet port. 4. Torque 95-105 in. lbs. 5. Torque 50-65 in. lbs. 6. After assembly, proof test for zero leakage at 100 psig. 7. After assembly, proof test for zero leakage at 1800-2000 psig. 8. Proof test for 160 ± 10 pounds between terminal ball and pull ring. 9. Enter data on I.D. plate then cover with transparent tape.				

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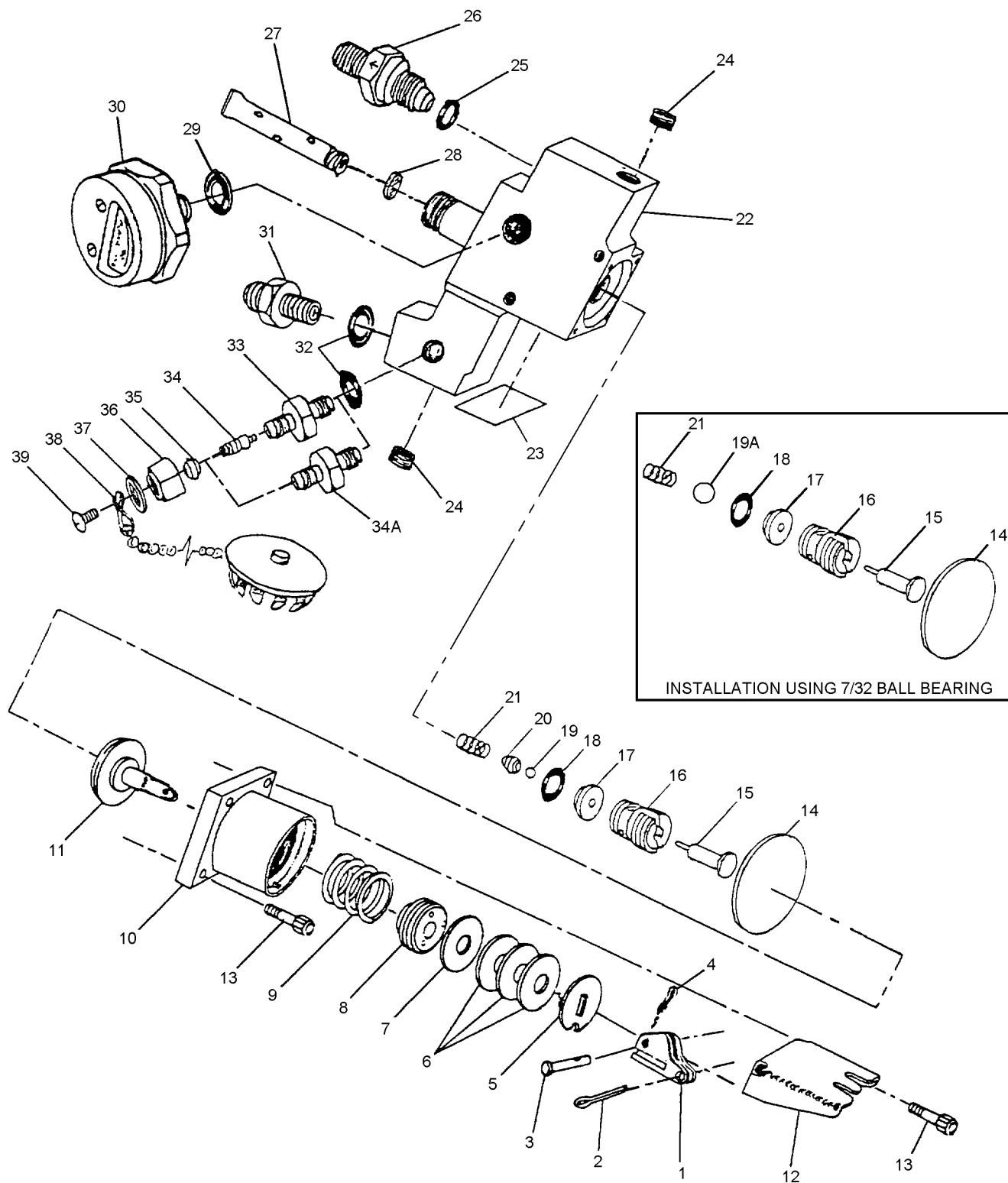
Figure and Index Number	Part Number	Description							Units Per Assembly	Usable On Code
		1	2	3	4	5	6	7		
		Notes (cont):								
		10. Stamp CAGE and assembly part number IAW MIL-STD-100 and cover with tape (NIIN 00-073-6094).								
		11. Ensure area is clean before applying adhesive No. 45 (CAGE 11153) to surface. Precoat one side of tape and allow to become tacky, position, and press tape on.								
		12. Install using adhesive No. 8089 (CAGE 99384).								



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Figure 10-25. Manifold Assembly – (P/N 8610034-1D)

Figure and Index Number	Part Number	Description	Units Per Assembly	Usable On Code
		1 2 3 4 5 6 7		
10-25	8810023-1	MANIFOLD ASSEMBLY, Outlet, oxygen (See figure 10-24 for NHA)	1	
-1	EW63004	. RELIEF VALVE, (30941)	1	
	P103-673	. RELIEF VALVE, (91816)	1	
	Z02RV04-4	. RELIEF VALVE, (91816) (Note 5)	1	
-2	99136-53-15	. O-RING (Note 3)	1	
-3	3104AS100-1	. VALVE, Check (Notes 1 and 4)	1	
-4	99136-53-15	. O-RING (Note 3)	1	
-5	MS24392D5	. NIPPLE, Tube (Note 2)	1	
-6	99136-54-15	. O-RING (Note 3)	1	
-7	MS24392D4	. NIPPLE, Tube (Note 1)	1	
-8	99136-53-15	. O-RING (Note 3)	1	
-9	8610034-1	. HOUSING, Manifold, outlet	1	
Notes:		1. Torque 95 to 105 in-lb. 2. Torque 125 to 135 in-lb. 3. Install coated with Krytox 240 AZ. 4. Alternate part number for check valve is 2624A4TT. 5. Torque 65 to 75 in-lb.		



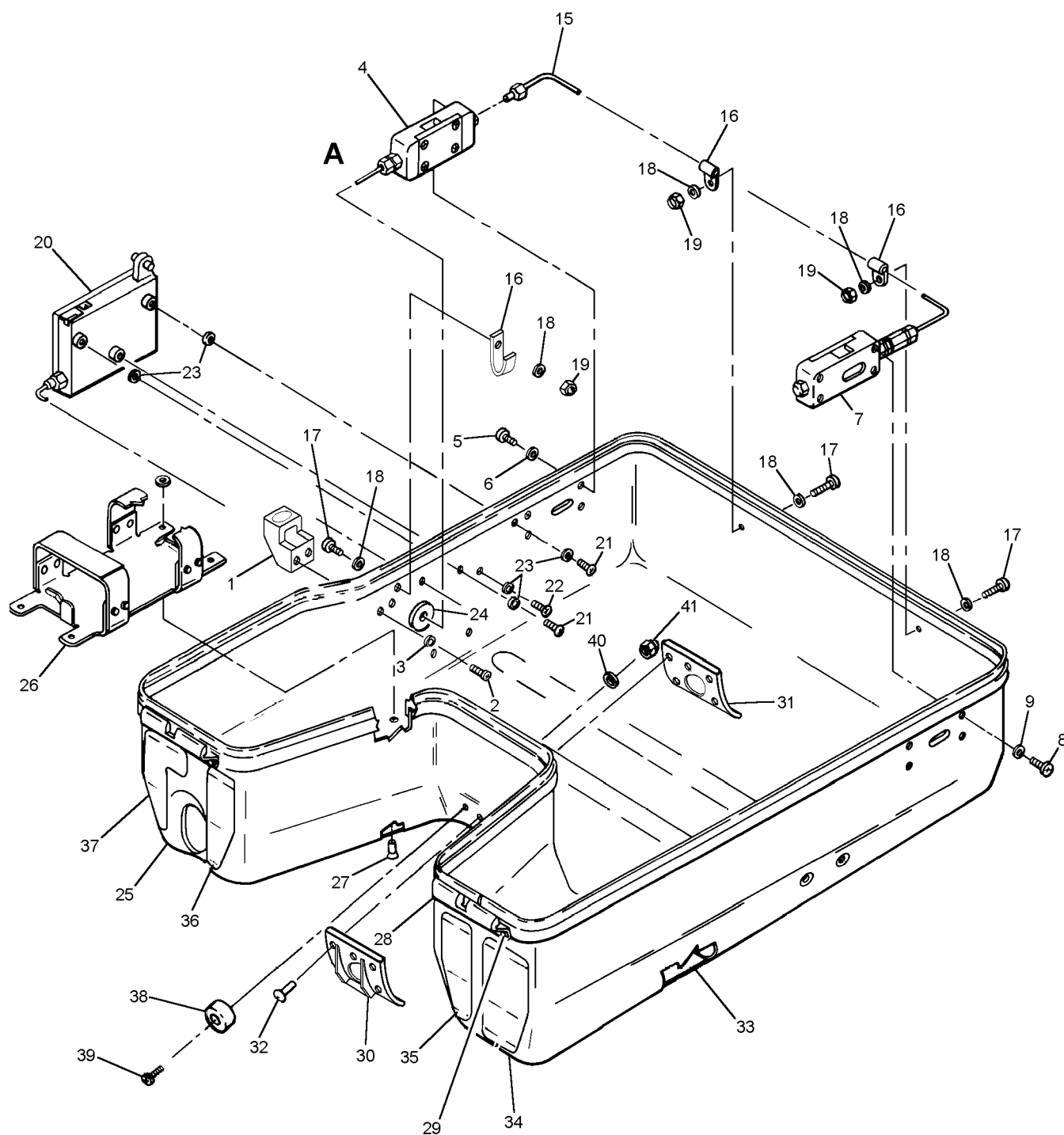
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Figure 10-26. Pressure Reducer Assembly (P/N 870024-1)

Figure and Index Number	Part Number	Description							Units Per Assembly	Usable On Code
		1	2	3	4	5	6	7		
10-26	8720024-1	PRESSURE REDUCER ASSEMBLY							REF	
		(See figure 10-24 for NHA)								
-1	8820049-1	.	CAM, Reducer, Long						1	
	767100-1	.	CAM, Reducer, Long, Alternate						1	
-2	MS24665-153	.	PIN, Cotter						1	
-3	MS20392-1C17	.	PIN, Straight, Headed						1	
-4	MS24665-151	.	PIN, Cotter						1	
-5	7620010-1	.	SPACER, Slotted						1	
-6	9110002	.	BELLEVILLE WASHER						3	
-7	767901-1	.	SPACER 0.032 INCH THICKNESS						AR	
	767901-2	.	SPACER 0.016 INCH THICKNESS						AR	
	767901-3	.	SPACER 0.025 INCH THICKNESS						AR	
	767901-4	.	SPACER 0.012 INCH THICKNESS						AR	
	767901-5	.	SPACER 0.006 INCH THICKNESS						AR	
	767901-6	.	SPACER 0.010 INCH THICKNESS						AR	
-8	7110010	.	RETAINER						1	
-9	741374	.	SPRING						1	
-10	7620011-203	.	FLANGE ASSEMBLY						1	
-11	767902-3	.	PISTON						1	
-12	7520014-9	.	BRACKET, Reducer						1	
-13	P60FS6-32-8CR	.	SCREW, Cap, Self-locking						4	
-14	723134	.	DIAPHRAGM						1	
-15	723106	.	PLUNGER						1	
-16	723103-1	.	RETAINER						1	
-17	7820011-1	.	SEAT						1	
-18	99136-12-15	.	PACKING, O-Ring						1	
-19	MS9461-03	.	BALL BEARING (0.125" DIA) (Note 1)						1	
-19A	19755	.	BALL BEARING (0.2198" DIA) (Note 1)						1	
-20	723107	.	RETAINER (Note 1)						1	
-21	7820012-1	.	SPRING, Helical Compression						1	
-22	8720025-1	.	HOUSING, Reducer						1	
-23	6999002-5	.	PLATE, Identification						1	
-24	MS27769D2	.	PLUG, Pipe, Hex, Socket						2	
-25	99136-53-15	.	PACKING, O-Ring						1	
-26	283684	.	CHECK VALVE						1	
-27	7620072-1	.	TUBE, Antisiphon						1	
-28	F-4173-1-20	.	FILTER ELEMENT						1	
-29	99136-52-15	.	PACKING						1	
-30	741376	.	GAGE, Pressure, Oxygen						1	
-31	MS24392J3	.	NIPPLE, Tube, Precision						1	
-32	99136-11-15	.	PACKING, O-ring						2	
-33	7520019-207	.	FILLER VALVE						1	
-34	AN809-1	.	CORE						1	
-34A	9120097-23	.	FILL VALVE (Note 2)						1	

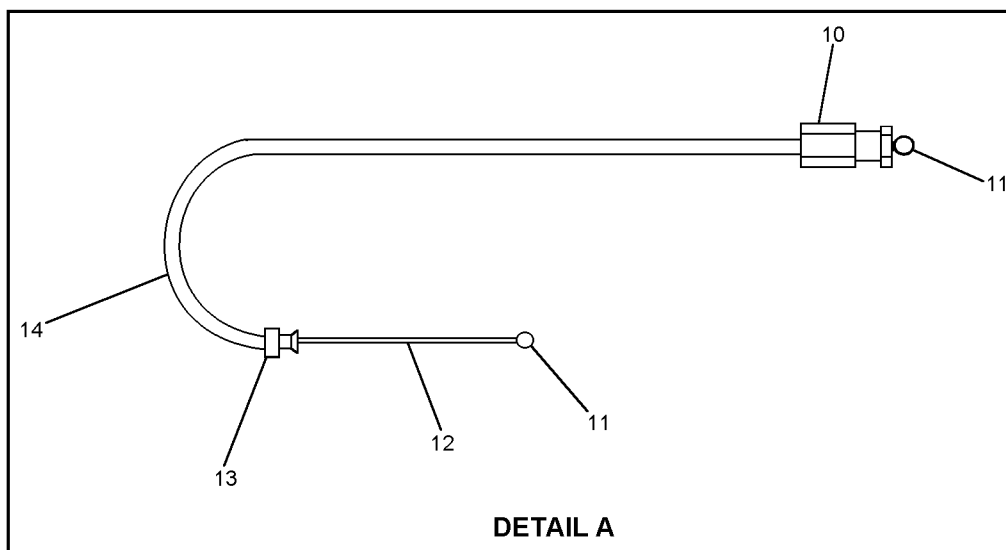
NAVAIR 13-1-6.3-2

Figure and Index Number	Part Number	Description							Units Per Assembly	Usable On Code
		1	2	3	4	5	6	7		
10-26-35	767862	.	PLUG	.....					1	
-36	767861	.	CAP	.....					1	
-37	AN960C4	.	WASHER	.....					1	
-38	767860	.	CAP ASSEMBLY	.....					1	
-39	AN515C4-4	.	SCREW	.....					1	
		Notes: 1. Retainer P/N 723107 is used only with Ball Bearing, P/N MS9461-03. Ball Bearing P/N 19755 requires no retainer. 2. Fill Valve can be used as an alternate to replace Filler Valve P/N 7520019-207 and Core P/N AN809-1.								



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Figure 10-27. Survival Kit Container Assembly (Sheet 1 of 2)



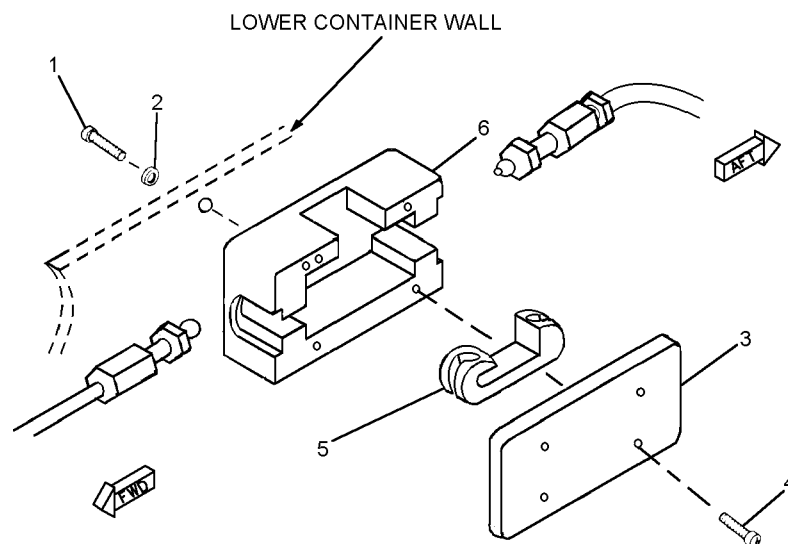
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Figure 10-27. Survival Kit Container Assembly (Sheet 2 of 2)

Figure and Index Number	Part Number	Description 1 2 3 4 5 6 7	Units Per Assembly	Usable On Code
10-27	8610003-1	CONTAINER ASSEMBLY, SURVIVAL KIT, SKU-12\A (See figure 10-23 for NHA)	REF	
-1	365757	. RETAINER, Handle (ATTACHING PARTS)	1	
-2	MS51957-43	. SCREW	2	
-3	AN960C8L	. WASHER ---*---	2	
-4	No Number	. LOCK ASSEMBLY, Lid, RH (See figure 10-28 for BKDN) (ATTACHING PARTS)	1	
-5	MS51958-63	. SCREW	4	
-6	AN960C10L	. WASHER ---*---	4	
-7	No Number	. LOCK ASSEMBLY, Lid LH (See figure 10-29 for BKDN) (ATTACHING PARTS)	1	
-8	MS51958-63	. SCREW	4	
-9	AN960C10L	. WASHER ---*---	4	
	7110030-3	. CABLE ASSEMBLY, Multi-release to RH lid lock assembly	1	
-10	7110020	. . COUPLING	1	
-11	RA-2487-2	. . BALL, Terminal	2	
-12	MIL-W-83420	. . WIRE	A/R	
-13	7110031	. . RETAINER	1	
-14	8610015-1	. . CONDUIT ASSEMBLY	1	
-15	8610016-1	. CABLE ASSEMBLY, Lid lock	1	
-16	MS25281-2	. CLAMP, Loop (ATTACHING PARTS)	3	
-17	MS51958-63	. SCREW	3	
-18	AN960C10L	. WASHER	6	
-19	22K2-02	. NUT ---*---	3	
-20	365705-5	. CABLE RELEASE ASSEMBLY (See figure 10-30 for BKDN) (ATTACHING PARTS)	1	
-21	MS51958-63	. SCREW	2	
-22	MS51958-62	. SCREW	1	
-23	AN960C10L	. WASHER	6	
-24	MS35489-31	. GROMMET (Note 1)	1	
-25	8610002-1	. CONTAINER, Riveted	1	

NAVAIR 13-1-6.3-2

Figure and Index Number	Part Number	Description							Units Per Assembly	Usable On Code
		1	2	3	4	5	6	7		
10-27-26	7010042	.	.					BRACKET ASSEMBLY, Radio beacon, AN/URT-33 (ATTACHING PARTS)	1	
-27	MS20426AD4-5.5	.	.					RIVET, Solid, cskh (0.125 dia x 0.375 lg) ---*---	4	
-28	8610056-1	.	.					HINGE, Male (ATTACHING PARTS)	2	
-29	MS20470AD4-7.5	.	.					RIVET, Solid hd. ---*---	4	
-30	8610018-2	.	.					RECEPTACLE, Plunger	1	
-31	8610019-1	.	.					BACKUP PLATE, Plunger bracket (ATTACHING PARTS FOR ITEMS 30 AND 31)	1	
-32	MS20470AD4-7	.	.					RIVET ---*---	5	
-33	8610053-1	.						PAD, Cork	1	
-34	8610002-21	.						TAPE, Pile fastener	1	
-35	8610002-23	.						TAPE, Pile fastener	1	
-36	8610002-25	.						TAPE, Pile fastener	1	
-37	8610002-27	.						TAPE, Pile fastener	1	
-38	8810021-1	.						BUMPER (ATTACHING PARTS)	2	
-39	MS51959-29	.						SCREW	1	
-40	AN960C6L	.						WASHER	1	
-41	22K2-62	.						NUT, Hex cap ---*---	1	



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Figure 10-28. Lid Lock Assembly RH

Figure and Index Number	Part Number	Description							Units Per Assembly	Usable On Code
		1	2	3	4	5	6	7		
10-28	9110000	LID LOCK ASSEMBLY, RH (31441)							REF	
		(See figure 10-27 for NHA)								
		(ATTACHING PARTS)								
-1	MS51958-63	.	SCREW						4	
-2	AN960C10L	.	WASHER						4	
			---*---							
-3	7110023	.	COVER, Housing						1	
		(ATTACHING PARTS)								
-4	MS51957-15	.	SCREW (4-40 x 0.312 lg) (Note 1)						4	
			---*---							
-5	8610059-3	.	SLIDE, Lid lock RH						1	
-6	7110019-3	.	HOUSING, Lid lock						1	
Notes:		1. For installation coat threads with Loctite adhesive No. 242.								

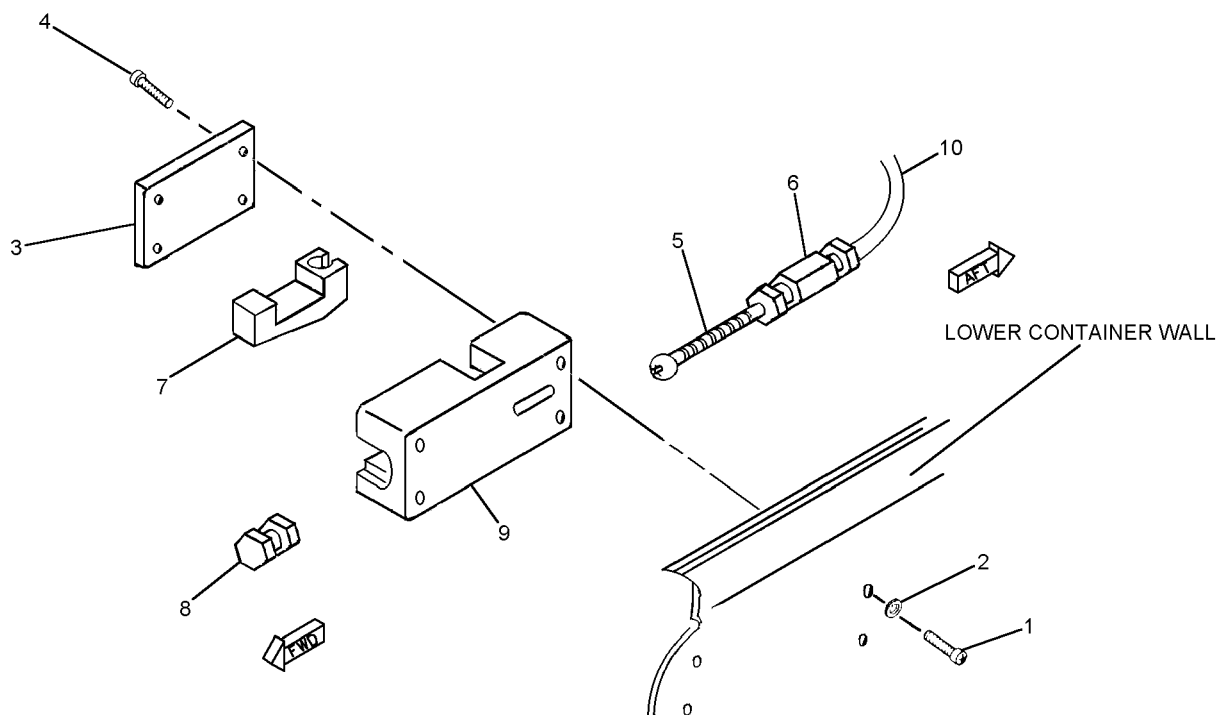
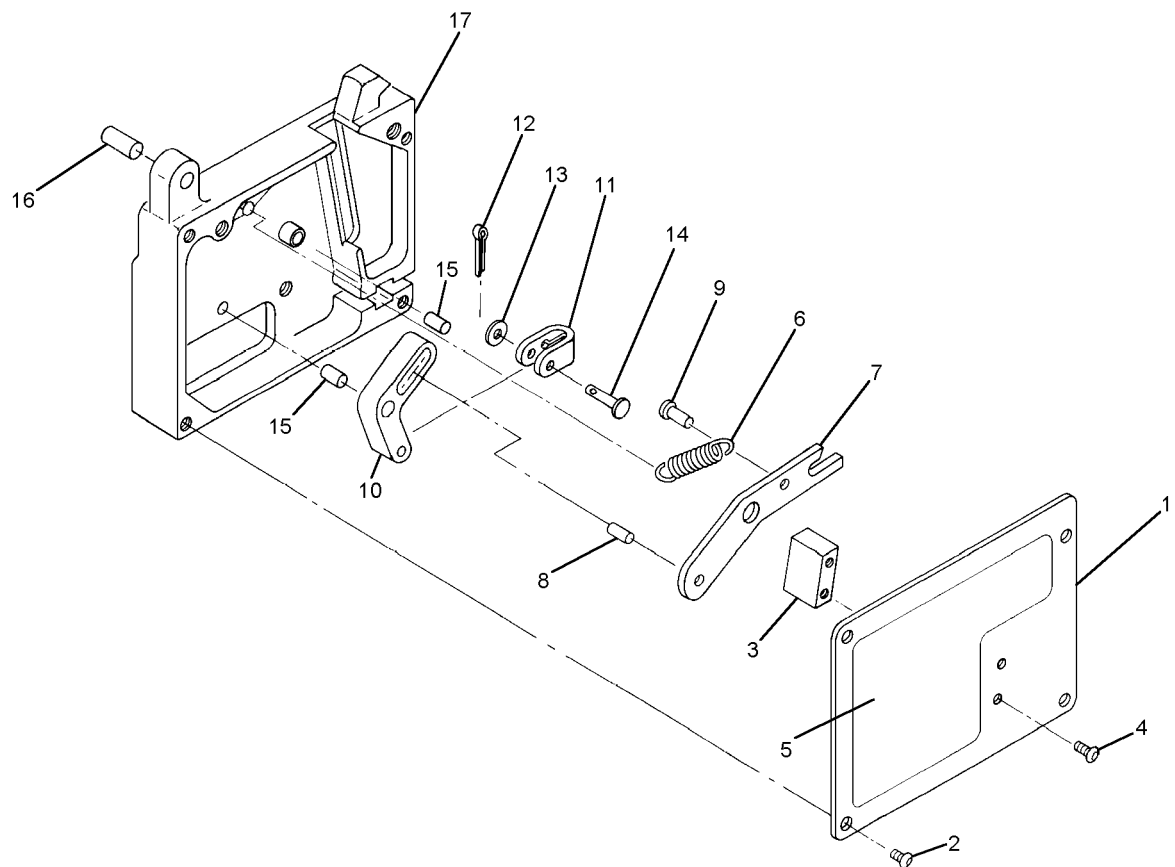


Figure 10-29. Lid Lock Assembly LH

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Figure and Index Number	Part Number	Description	Units Per Assembly	Usable On Code
		1 2 3 4 5 6 7		
10-29	9110001	LOCK ASSEMBLY, Lid, LH (31441) (See figure 10-27 for NHA) (ATTACHING PARTS)	REF	
-1	MS51958-63	. SCREW	4	
-2	AN960C10L	. WASHER	4	
		---*---		
-3	7110023	. COVER, Housing	1	
		(ATTACHING PARTS)		
-4	MS51957-15	. SCREW (4-40 x 0.312 lg) (Note 1)	4	
		---*---		
-5	7110056	. SPRING (19016), LH	1	
-6	7110024	. ADJUSTER, Conduit and cable, LH	1	
-7	8610059-1	. SLIDE, LH	1	
-8	7110021	. PLUG, LH	1	
-9	7110019-3	. HOUSING, Lid lock	1	
-10	8610016-1	. CABLE ASSEMBLY	1	
Notes:		1. Coat threads with adhesive No. 242 prior to installing.		



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Figure 10-30. Cable Release Assembly (ASFS P/N 365705-5)

NAVAIR 13-1-6.3-2

Figure and Index Number	Part Number	Description	Units Per Assembly	Usable On Code
		1 2 3 4 5 6 7		
10-30	365705-5	CABLE RELEASE ASSEMBLY, (See figure 10-28 for NHA)	REF	
	365736-5	. COVER ASSEMBLY	1	
-1	365709	. . COVER	1	
		(ATTACHING PARTS)		
-2	MS51957-13	. . SCREW	4	
		---*---		
-3	365735	. . LUG, Lever stop	1	
		(ATTACHING PARTS)		
-4	MS51957-15	. . SCREW (Note 1)	2	
		---*---		
-5	8610036-1	. DECAL, Release cover	1	
	365712	. LEVER ASSEMBLY, Actuating	1	
-6	365714	. . SPRING, Extension	1	
-7	365706	. . LEVER	1	
-8	99002-10	. . PIN	1	
-9	MS20613-4C4	. . RIVET	1	
	365713-3	. . LINK ASSEMBLY, Release	1	
-10	365708	. . LINK, Intermediate	1	
-11	365707	. . LINK, Connecting	1	
		(ATTACHING PARTS)		
-12	MS24665-151	. . PIN, Cotter	1	
-13	AN960C4L	. . WASHER, Flat	1	
-14	AN121603	. . PIN, Flat head	1	
		---*---		
	365733-1	. HOUSING ASSEMBLY	1	
-15	99007-4	. . PIN	2	
-16	99004-1	. . PIN	1	
-17	365704-1	. . HOUSING, Machined	1	
	Notes: 1. Coat end two threads of screws using sealing compound (MIL-S-22473) for installation.			

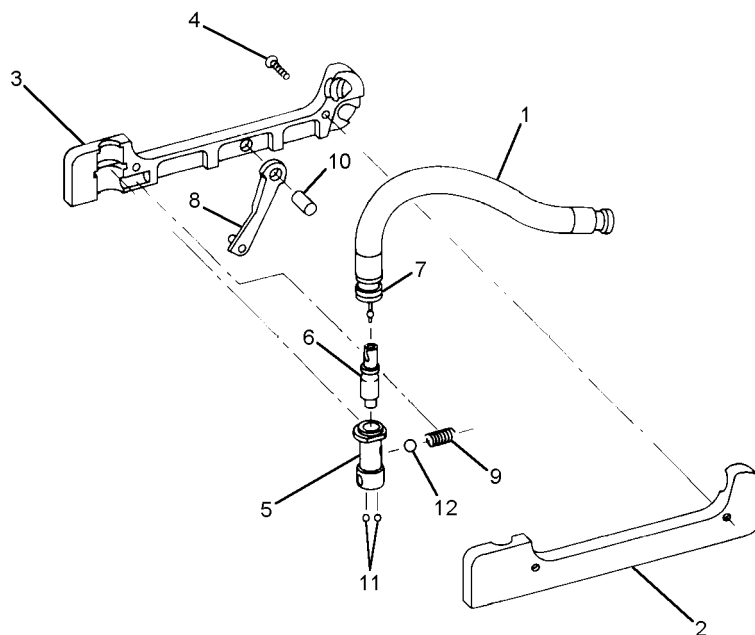


Figure 10-31. Handle Assembly

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Figure and Index Number	Part Number	Description							Units Per Assembly	Usable On Code
		1	2	3	4	5	6	7		
10-31	365750	HANDLE ASSEMBLY, (See figure 10-23 for NHA)							REF	
-1	7310005	. HANDLE ASSEMBLY, Molded							1	
-2	365751-3	. HOUSING, Handle, LH							1	
-3	365751-4	. HOUSING, Handle, RH							1	
		(ATTACHING PARTS FOR ITEMS 2 AND 3)								
-4	COML	. SCREW, Flt hd (82 deg csk), hex soc, stl CAD plt (6-32NC-2A X 0.50 lg) ---*---							3	
-5	365753	. SLEEVE							1	
-6	365754	. PIN							1	
-7	365758	. SLEEVE, Teflon							1	
-8	365738	. LINK ASSEMBLY							1	
-9	C180-032-0690M	. SPRING, CAD Plated							1	
-10	MS9390-420	. PIN, Dowl							1	
-11	MS19060-4810	. BEARING, Ball							2	
-12	MS19060-4812	. BEARING, Ball							1	

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AN809-1	10-26-34		MS24392D5	10-25-5	PAGZZ
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AN960C6L	10-23-6	PAGZZ		10-24-52	PAGZZ
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AN960C6L	10-24-103	PAGZZ	MS51957-69	10-24-31	PAGZZ
AN960C8L	10-27-3	PAGZZ	MS51958-61	10-24-79	PAGZZ
C180-032-0690M	10-31-9			10-24-83	PAGZZ
COML	10-31-4		MS51958-62	10-23-13	PAGZZ
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GA506D1	10-23-14	PAGZZ		10-27-22	PAGZZ
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MS20426AD4-5.5	10-27-27			10-24-27	PAGZZ
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7520014-9	10-26-12		8610022-23	10-23-24	MGGZZ
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7620011-203	10-26-10			10-24-106	MGGZZ
7620072-1	10-24-10		8610022-29	10-23-29	MGGZZ
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8610002-23	10-23-31	MGGZZ	8610050-22	10-23-8	PAGZZ
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8610002-27	10-23-27	MGGZZ	8610054-1	10-23-10	PAGZZ
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8610003-1	10-27	MGGZZ	8610056-1	10-27-28	PAGZZ
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8610008-1	10-24-100	PAGGG	8610059-3	10-28-5	PAGZZ
8610009-1	10-24-76	MGGZZ	8610061-1	10-24-9	PAGZZ
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